The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. XLVIII. CHICAGO, ILLINOIS, MARCH 9, 1907. No. 10.

Original Articles

THE TECHNIC OF LAMINECTOMY.*

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From a fairly long training in the conservatism of orthopedic surgery, to which at one time I devoted practically all my efforts, I have developed a tendency to prefer, in general, those operative methods which conserve tissue, and especially if the tissue so saved can be expected to be of use to the patient. That the laminæ of the vertebræ were orginally of use, to protect the cord and to give points of attachment for spinal muscles was obvious; that they would still be of use if, after a laminectomy, they could be restored to position and function seemed good reasoning; that this could be done I believed had been demonstrated, and I was impressed somewhat with the description of the operation as given by Bickham.[1] There was nothing new in this description, but it came at a time that was, or seemed, opportune, for Dr. Leo Newmark and I had been waiting and watching many years for a tumor of the spinal cord, and one presented itself just about the time when Bickham's paper was in my mind.

The history of this tumor of the cord is not germane to this paper. It may suffice that symptoms of pressure on or involvement of the left side of the cord at about the level of the fourth cervical vertebra had gradually developed, that the pain had finally become unbearable and the disability was steadily increasing, so that the patient was ready to submit to the operation.

TECHNIC.

A priori, the osteoplastic method, because of its more nearly restoring the integrity of the spine, should be especially preferable in the cervical, and perhaps, too, in the lumbar region, for in these regions the vertebræ are not fortified and braced by the attachments of the ribs, as is the case in the dorsal region. It was, therefore, the operation I selected, and I rehearsed it on the cadaver, for, while laminectomy plain was not new to me, the osteoplastic operation in the neck was new. The extensive incisions in the muscles and the great mobility of each individual cervical vertebra were the points for comment in this rehearsal, but my general impression was that the operation was practical, and so I decided to do it. It was done by turning up a quadrilateral flap containing skin, fascia, muscles and the laminæ of the third and fourth cervical vertebræ. The outlines of this flap on the skin were broader than were the incisions as they approached the bone, so that the whole flap was practically beveled, getting narrower in the deeper parts. I found it impossible to cut the muscles of the deeper parts of the neck with the scalpel. They rolled up before the knife, or slipped to one side, or became spasmodically contracted and pulled out of the way. The latter part of the section of the muscles had to be done with scissors, the muscular tissue being caught with forceps so as to hold it still. In addition to this difficulty, there was a plentiful amount of hemorrhage from small and medium-sized vessels. The flap, when it was formed, seemed a most disorganized mass of tissue, for the areolar planes between the different anatomic layers permitted so much latitude of movement that the effect was as if the part had been mutilated. The section of the bones had been intended to have been made with the Doyen saw, but the wound was so deep that the saw was wholly inadequate, and so I used a pair of Liston bone forceps, curved on the edge that had served me before for this same purpose. The exposure of the cord, after splitting of the dura mater, was satisfactory and one could easily look up into the skull and see the under surface of the cerebellum, but the tumor, which was found as had been expected, extended down below the level of the fifth lamina, and so, without any attempt at more osteoplastic work, the laminæ of the fifth and sixth vertebræ were resected by pushing the muscles away from them by blunt dissection, cutting the bones near the pedicles and removing the fragments. The tumor was a layer of sclerotic fibrous tissue closely attached to the surface of the cord and dipping down somewhat into its substance. It was impossible to remove it without serious damage to the cord, and so it was left *in situ* and the wound closed. As the flap was folded down the third and fourth laminæ fell back easily in place and the muscles were then fastened by interrupted chromicized sutures. It was impossible, however, to make an anatomic union of the cut muscles. Never had the muscles of the neck seemed such a hopeless tangle. I had to be content with a few sutures at points where they seemed to be needed. The tendon of the trapezius was accurately closed and so was the skin. A small drain was put in to take away the serum that was sure to be the result of such an extensive incision in the muscles.

PLAIN LAMINECTOMY AND THE OSTEOPLASTIC OPERATION.

From this experience with this operation I can easily see that it would have been better had I done the ordinary laminectomy instead of doing this very difficult osteoplastic operation. I should have saved time, and I should have saved tissue, and I think I should have saved function. I do not believe that the laminæ of the third and fourth cervical vertebræ, for the conservation of which the whole technic was planned, were worth the trouble; nor will they be worth it to the patient.

A laminectomy in the cervical and perhaps in the lumbar region is very different from one in the dorsal region, for in the dorsal region the spine is convex posteriorly (kyphotic) and in the cervical and lumbar re-

* Read before the Western Surgical and Gynecological Association, August 31, 1906, at Salt Lake City, Utah.

1. Annals of Surgery, 1905, March.

gions the spine is concave posteriorly (lordotic). Now, in the lordotic region, the muscles which pass over more than two vertebræ are chords of arcs of various lengths. In kyphotic regions the muscles which pass over more than two vertebræ practically use the intermediate bones as pulleys around which their force is passed from the origin to the insertion of the muscle. Removing the laminæ of the cervical vertebræ, in a lordotic region, does not interfere with the effect of the muscles which span the gap, for they are still chords of the arc, and they will still extend the spine in this region. Removing the laminæ in the dorsal kyphotic region takes away the pulleys from the muscles and permits them to fall to deeper levels and makes them approach, perhaps, in function, the flexors of the spine by robbing them of their power to extend it. At any rate, it permits the balance of power to pass to the flexor side of the spine. From this reasoning it seems to me that the osteoplastic method would be preferable in the dorsal spine because of the retention of the laminæ and spinous processes and the preservation of their pulley effect on the muscles of extension. But in the cervical spine (this may be true also of the lumbar spine) the preservation of the laminæ is not necessary for the preservation of the extensor function of the extensor muscles.

Furthermore, in the osteoplastic method, the muscles are seriously implicated, for they are included in the flap, and consequently they must be cut across at the lower limit of the flap, and that they may unite again accurately and resume function is a question, for not only is accurate anatomic suture impossible, but the innervation of the muscle may be, and very likely is, interfered with by the lateral incisions, especially the semi-spinalis colli and the cervical multifidus, which lie wholly in the area of the flap, so that the osteoplastic method in the cervical region must be considered to be a surgical exploit, done for the sake of saving small fragments of bone whose value is questionable, and also at the risk of interfering with the musculature of the part by cross sections of large groups of important muscles, and perhaps by the sections of the motor nerves of these muscles.

To get some personal information as to the preferences of others on this point I asked the opinions of Bevan, Binnie, Willard, Cushing, Bloodgood, Munro, Moore, McArthur, Bradford, McCosh, Richardson, Gibney, and Abbe. The poll of votes was unanimously in favor of laminectomy plain, with no osteoplastic frills. The only differences of opinion were in matters which were legitimately matters of taste, to wit: the choice of instruments for cutting the laminæ, after they had been cleared of the soft tissues, including, always and especially, the periosteum. Binnie prefers an osteotome, Moore a chisel; every other selected rongeurs or a Devilbis forceps. Moore added that he no longer sutured the meninges; the omission saved time and the result was equally good: he has found, however, that sometimes a transverse cut in the soft tissues gave him more room when he wished to expose some of the deeper parts. McCosh's relation of the fact that he several times had started his operation with the intention of doing an osteoplastic resection and had reverted to the simpler technic was very frank and very consolatory. Abbe's operation differs from the others in that he saves the spinous processes and the important supraspinous and interspinous ligaments; he certainly thereby lessens the amount of hemorrhage, which is an important item, for he minimizes the cutting and one would think that in a spine so operated on the conservation of the ligaments would lessen muscular work in the maintenance of the erect position. Cushing made the very important contribution of the fact that in repeating the operation on the same patient a year after the first event, he had found new arches produced from the conserved periosteum. If this can be expected in all cases it obviates entirely the need for the osteoplastic method in almost all instances. This bone regeneration with Abbe's saving of the spinous processes should give a spine functionally identical with the original state.

THE OSTEOPLASTIC METHOD PRO AND CON.

And yet, in spite of this, I think that sometimes cases may arise in which the osteoplastic method may have a place, because of the immediate restoration of the arch of the laminæ without waiting for the regeneration of bone. This is in cases of vertebral tuberculosis in which the angular deformity of the kyphos is practically a right angle. In these spinal columns, as can be seen if a longitudinal section of the bones be made, the bony canal is itself contracted antero-posteriorly and the cord has very little room and surely none to spare. If such a spine be subjected to a plain laminectomy, with sacrifice of the spinous processes and laminæ, the uncut longitudinal spinal muscles fall back not to their original level but to a deeper level, and lie in the sulcus between the articular processes, resting on the peridural fat. Beneath this is only the dura mater and the cord, and the latter must take the major part of the pressure which these muscles originally made on the laminæ in pulling around the kyphos as around a pulley.

Because of this concept of the mechanics of the condition, I essayed the osteoplastic method a second time, shortly after the operation on the patient already reverted to, in the case of a young girl, paralyzed for more than a year from the pressure of a right-angled kyphos due to vertebral tuberculosis in the upper dorsal region. To my disappointment I could not make any ordinary forceps nor the Doyen saw cut the laminæ satisfactorily at their outer limits, and I was obliged to use the Keen forceps beginning to bite away the bone at the center of the arches. This changed the osteoplastic into a plain laminectomy, and as I went on I found that absorption of the bodies of the vertebræ had been accompanied by ankylosis of the spinal articulations and fusion of the laminæ, this condition accounting for my inability to get the blade of any ordinary forceps between them. Nothing much better could be asked for so far as the result in the bones was concerned, but the cord demanded relief from pressure and the laminæ had to be cut away. The muscles were replaced and sutured, healing occurred without trouble, and the girl recovered in a surprisingly short time from her paralysis: in fact, the day following the operation she could move her feet and legs not a little. But each time that I have left her in bed without spinal traction, so that she could use the spinal muscles some and move her head about, or have tried to get her up, even though I had her in most carefully planned and well applied plaster-of-Paris apparatus, holding head, neck and trunk, her paralysis has deepened, while each time that I have put her back in bed and reinstituted spinal rest and spinal traction the paralysis has disappeared. Of course, it is a debatable point as to the exact tissue causing the pressure on the cord, but I can not myself put aside the idea that the muscles, even though in this case they had been cut in making the flap according

to the osteoplastic plan, made some pressure on the cord. No outside substance has made the pressure for that has been guarded against; if cicatricial contraction made it, relief would not follow simply on restoration of the spinal traction; nothing else in the spinal column or its environment could make the pressure. Spinal traction puts these muscles wholly at rest and the paralysis then disappears. I can not myself explain the phenomenon on any other hypothesis.

Now if I am right the osteoplastic plan would have replaced the laminæ where their pulley function could have been continued and the muscles have been held at a proper level. Pressure again on the cord might have been avoided and the permanence of the relief have been assured. It is in such a case as this that I believe the osteoplastic plan may have a legitimate use and in another such case I would again attempt the same operation.

There is one thing more to say about the condition of the patient on whom I completed part of my operation according to the osteoplastic plan. The support of the head is not adequate and it is said to be carried as if it were balanced on a pole, while movements of it are slow and difficult. All of the gentlemen who wrote me of this point said plainly that the loss of the laminæ did not seem to weaken the spine; consequently I am safe in assuming that the extensive section of the muscles in this case is to be credited with causing the disability noted.

As against the operation we may range the facts that it is done for the sake of saving fragments of bone which are not indispensable, and which are most likely to be replaced at a later date; that it necessitates a section of the muscles which leaves the spine with adequate muscular control; that it substitutes a difficult and long procedure for one that is comparatively easy and short.

In favor of the method I can only say that it seems to me to be applicable to those cases of right-angled kyphos in which it is necessary to have at once the restoration of the laminæ to protect the cord from the pressure of the overlying muscles.

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MEDICAL TENDENCIES AND MEDICAL IDEALS.*

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The custom of opening the college session with a general address is an appropriate one, for it affords an opportunity to discuss some topics of interest alike to the medical student and teacher which are not provided for in the curriculum. It is well at times to take a somewhat general survey of our profession, to study its tendencies and get possibly a clearer vision of what should be its ideals.

MEDICINE AND MODERN SCIENCE.

In common with every branch of knowledge, medicine has felt the influence of the great advance in modern science. The progress made in the collateral subjects, biology, chemistry, physics, bacteriology, to which medicine is so closely related, has made necessary a general readjustment of opinion. Slowly but surely the superstition, prejudice and ignorance or half knowledge of the past are vanishing before the light of modern discovery, and almost before our eyes a new science of medicine is being evolved.

The general attitude of our profession to-day may be characterized as one of scientific skepticism. It receives nothing on authority, no matter how ancient or honored. It places above everything else the ability to see things as they are, and to draw accurate conclusions from these observed facts. It desires to submit to a fresh examination, by the methods of modern science, every theory or practice and endeavors to make the new view correspond with the latest knowledge. It seeks to establish on a scientific basis every fact in etiology, every principle in diagnosis, every method of treatment.

Huxley says that one who exposes an old error should be as highly regarded as one who discovers a new truth. Therefore, we should honor the one as much as the other, for both are needed in the development of our science. In the overthrow of much of the ancient science of medicine, we must not at the same time lose the many valuable contributions of the past to the medical art, none the less real because sometimes based on wrong theory.

But this same new scientific spirit to which we owe so much has brought with it an incidental peril. While becoming more scientific, there is a great danger that medicine shall become less human. Is it not true that in magnifying the value of medicine as a science there has come about incidentally, and perhaps somewhat unconsciously, a disposition to depreciate the dignity and importance of medicine as an art?

The men of the laboratory to-day dominate medical thought. They form a sort of oligarchy, to whose decrees those who study medicine at the bedside only must needs submit, often with a subconscious feeling of their own inferiority. I can not myself resist the opinion that the man of the microscope and the culture tube occupies just now a place of too great importance, at least in the minds of the medical student and the younger practitioner.

The laboratory is rendering immense service to practical medicine to-day, but it can not do away with the necessity for careful bedside observation of the sick; nor are its conclusions to be regarded with the infallibility which, in the minds of many, attaches to them. The student of to-day is likely to gain the impression that unless they rest on laboratory confirmation all diagnosis is doubtful, all prognosis uncertain, and all therapeutics unscientific. The laboratory has its limitations which are as distinct as those of clinical medicine. It is to be regarded as supplementary, but not as the whole thing.

I have already said that the important part of the training of a physician is the formation of the habit of making his own observations and of drawing correct conclusions from them. He who flies to the laboratory for a solution of every problem presented in his practice soon comes to be dependent and neglectful, to distrust his own observations, and, finally, to undervalue all clinical observations. While, therefore, we appreciate this indispensable aid to medicine, let us not lean on it to the weakening of our powers of reasoning and observation. The men of the past who have given us those marvelous descriptions of disease derived their knowledge from careful personal observations with little aid from other sources. Let us see to it that this sort of study does not become a lost art.

* Address delivered at the opening of the College of Physicians and Surgeons, New York, Sept. 26, 1906.

MEDICINE AS AN ART.

Time was when medicine was thought of solely as an art, and the science of medicine can hardly be said to have existed at all. Until very recently nearly all who bore the title of doctor of medicine were practitioners. To-day there is a constantly increasing number who enter medicine with a view to becoming teachers, investigators, hygienists, public health officials, etc., but our medical education should not be shaped chiefly by their special interests or needs. Even in the aggregate their number is small when compared with the great body of medical practitioners. The lives of this class will be devoted to the care of the sick and injured, which they will do more or less efficiently according to their training and individual ability. For this class the art of medicine possesses an interest and importance which is hardly exceeded by the science of medicine, indispensable as that is. More men fail in the practice of medicine from their inability to understand and manage people than from their ignorance of medicine, colossal though at times that ignorance may be.

Exactly what do we mean by the art of medicine and how is it to be studied by one entering the profession? Medicine as a science has to do with disease; medicine as an art, with people suffering from disease. The difference between these two is a very real and important one. The science of medicine the student may learn from books, from lectures, in the laboratory, and in the post-mortem room. The art of medicine, or the manner of using this knowledge, he may acquire to some degree by a study of the ways of successful physicians, but in the main he must learn it through his own experience. In this, his previous general education and training and his experience in and his knowledge of the world count for much.

Tact.—The natural gift that perhaps contributes most to success is tact. It is called into requisition every hour of a physician's life. To meet and greet patients properly; to take a history which shall be at once brief, but accurate and comprehensive; to inquire into the innermost secrets of the private life of a man or woman with such tact and delicacy as to encourage confidence, but not give offense; to announce a prognosis which takes away all hope from an anxious family in a manner at once honest and sympathetic; to make a physical examination without giving pain or offending the sensibilities of a patient, and, at the same time, with a thoroughness which the gravity of the responsibility assumed demand; to make local applications in the way which shall cause the minimum amount of discomfort or pain; to combine unpleasant drugs so as to obtain the effects desired without unnecessarily disturbing the stomach or taste of the patient; to give personal attention to the minor details which contribute to the comfort of the person who is ill, even though his disease may be incurable, or, on the other hand, not serious: these are some examples of the physician's art. They are well worth his time and thought. Besides, we should not omit to mention the treatment of all patients, no matter how humble their station, with courtesy and consideration.

Ability to Inspire Confidence.—No part of the art of the physician is so essential to success as the ability to inspire confidence. Possibly so fundamental a quality as this should not be called an art; certainly it can never be artificial. While it belongs naturally to some persons, it can, to some degree, be cultivated by all. The qualities on which it depends should at least be appreciated by every one. While a certain something which stimulates confidence may be inspired by the easy-going, optimistic man of plausible speech and sufficient assurance, yet the patient soon distinguishes the real thing from its imitations. At bottom the power to inspire confidence rests on ability and strength of personal character or integrity, and on nothing else does it long endure.

Said a gentleman to me, in speaking of James J. Hill, that he never left him without the feeling that he ought to sell everything else that he possessed and invest all in Mr. Hill's properties. Such a power to influence one's fellowmen is valuable in any calling, but in medicine it is indispensable. To be able on a short acquaintance, often after but a single interview, to inspire such confidence that a person may be willing to entrust his own life or that of one of his family to your judgment or skill, is a rare gift. Something of this power must be in the possession of every successful physician. With the world at large it counts for more than scientific attainments.

Will Power.—Next to the ability to inspire confidence must be placed that force of character which is required to make the patient act as we wish him to do, so to influence his will that he will carry out the advice which has been given.

Discretion in Speech.—Again, if he would preserve the confidence he has inspired, the physician must have discretion in speech. To know the family secrets of an entire community and never by word or look betray them requires rare judgment and self-control on the part of the physician, and also, we should add, of his wife, whom he too frequently makes his confidante in such matters.

Sympathy.—Sympathy more than any other quality wins the hearts and confidence of patients. The cold, calculating man, even though he be exact and skilful in his science, has never a warm welcome in the sickroom. To be only "a case," however interesting, and not a suffering fellow-being, is what a patient particularly abhors, and rightly. The physician should be hopeful and encouraging without being untruthful, flippant or insincere. He must have a keen sense of appreciation of exactly what it is that people most need in a physician. They call him when they are in pain, in trouble or in alarm. Besides physical relief, they want a certain moral support, some one to lean on, to allay their fears if they are groundless, as more often than not they are found to be.

Regard for the Sensibilities of the Poor.—One should never forget that the poor, as well as the rich, have their sensibilities which are often sorely wounded by the thoughtless and inconsiderate way in which they are treated by the physician of the hospital or dispensary. It is certainly true, as has often been remarked, that the poor have always proved the young physician's stanchest friends, whom he can not well afford to neglect or offend.

I have dwelt at some length on the present tendency to ignore the humanities of our profession and to think too much, or more exactly, too narrowly of medical science and too little of its practical application in real life. My reason for so doing is the feeling that this tendency is growing among us, fostered, as it often is, by habits acquired through education abroad. The importance to the physician of the virtues of self-control, honesty, frankness, sincerity and of such personal qualities as tact and sympathy should never be underestimated by the young physician, but should be cultivated with the

same assiduity as physical diagnosis or operative surgery.

TEMPTATIONS TO BE RESISTED.

Commercialism.—Of the prevailing tendencies in medicine the one most to be deprecated is that to commercialism. It is perhaps not surprising that our profession, in common with other callings, should feel the baneful influence of this spirit of our age. It is only another evidence of the fact that, in the public mind, material and financial success has come to overshadow every other form of achievement. Our times have witnessed many examples of the debauching of the legal profession to attain unscrupulous corporate ends. The law, it is said, has almost ceased to be a profession and has become only a business, adopting business methods and business standards. May this never be true of medicine. It is perhaps not to be expected that human nature should be changed by attaining the dignity of writing itself M.D. But inasmuch as the traditions of the medical profession are nobler and its responsibilities more sacred than those of most of the professions, the more to be deplored is the spirit of which we are speaking.

There are several different ways in which the commercial spirit may manifest itself in medicine. One of the most common springs out of an inordinate ambition for immediate success. It is not natural, it certainly is not desirable, that great professional success should come at once to a young physician just out of his college or hospital. Time is necessary for experience to accumulate and judgment to ripen. He who makes undue haste to succeed shall not be blameless. One with such ideals before him begins by making the shortest possible cut to knowledge. He often starts in practice as a specialist and wishes to be known at once as such. He is familiar with the fact that advertising is the secret of success in modern business. That shrewd advertising may bring business in medicine as well as in trade, the success of the numerous charlatans bears witness. But he does not wish to become an advertising quack and see his card in the morning paper. He adopts other devices. He advertises himself to his friends and acquaintances. His wife bends all her energies toward placing him before the public. He cultivates the acquaintance of the newspaper reporter, and soon his name finds its way often into the public press. He is interviewed in regard to the prevailing epidemic, or he is credited with performing some remarkable operation, or with some new ideas on the subject of the treatment of cancer or tuberculosis. In medical literature, also, his name is often seen. He rarely loses an opportunity to appear at medical meetings and is always ready to discuss the paper of the evening. His written contributions are apt to take the form of a citation of cases in which the newest remedy has been used, whose real purpose is to exploit the remedy and the doctor at the same time, his reward being a check from the manufacturer. His articles are then circulated as the "latest literature" on the remedy in question. There are other ways innumerable in which the advertising doctor seeks to advance himself. To narrate them is not profitable nor interesting.

To some, such practices as those described may seem only in bad taste; to others possibly as examples of an enterprise almost meritorious. But it is hard to draw the line as to how far one may go and yet preserve his reputation. Another man whose moral standards are not so high, or whose necessities are greater, actuated by this same motive to get business by every possible means, does not hesitate to take advantage of another physician or to gain at his expense. He may even be tempted to go to greater lengths and finally end in practices absolutely dishonest.

Judgment Biased by Monetary Considerations.—The man who allows his mind to be dominated by a desire for financial success readily falls into another temptation, that of allowing his professional judgment to be warped by monetary considerations. Such a thing may come about so gradually that the man himself may hardly be conscious of it.

A well-known and very successful gynecologist said to me once that he had reached the conclusion that no man could be strictly honest and conduct a private hospital. This statement, although perhaps an exaggeration, expresses an important truth. The temptation may be great. The enterprise has imposed heavy financial obligations. It has not proved the success the surgeon had anticipated. The year has been a poor one; rooms are vacant and expenses are going on. A well-to-do patient seeks his advice. An operation is not necessary, and, though at another time the surgeon would not himself have advised it, he finds it easy to do so now, and possibly justifies himself by the thought that many of his colleagues would do the same. Such a step once taken, a similar decision is reached the second time with fewer misgivings, and soon the policy of doing operations with insufficient indications may become his established practice. If not an operative case, the patient may be induced to submit to prolonged but unnecessary and even useless treatment. There is a subtle temptation here for every physician or surgeon whose eye is always on the almighty dollar; but it comes with increased force to one whose financial needs are great. His vision of right and wrong must be very clear and his ethical standards high not to be biased in such emergencies.

Two years ago I was in attendance with another physician on the young child of a wealthy merchant, who was seriously ill and over whom was hanging the possible necessity of a grave surgical operation. The parents were naturally very anxious. When, after one of our consultations, the surgeon had left the house, the father said, "Do you think that man's judgment in deciding to operate would be influenced by the fee he would receive for it?" Happily, in this instance, I could say, "Emphatically no." Nor do I believe there are many men in the profession of whom it would be true. But this anxious parent expressed a distrust which many others have felt. Conceive, if you can, a condition of society in which such a feeling of suspicion should be general, or worse still, when it should be justified. What technical skill can ever take the place of moral character in a physician or surgeon? High ethical standards have been maintained in the past by the great body of physicians to a remarkable degree, often in the face of great temptation. Let us hope that the ideals of the physicians of the future may be just as high.

Medical Graft.—There is one other phase of commercialism seen in our day, which may be characterized as medical graft. This man does not conceal the fact that he is in medicine for what he can get out of it. With respect to every transaction he adopts the politician's anxious query, "Where do I come in?" His methods are well known. He visits the specialist, the surgeon, or consultant, ostensibly in behalf of his patient, and lets it be known that he expects "the usual percentage" of the fee in case the patient can be pursuaded, intimating at the same time that if this is made satisfactory he will need

consultations in the case of other patients, and has other work which he can turn over to the surgeon. Medical grafters of this type, I am glad to say, are not numerous, but they are, I must believe from my information, increasing rather rapidly. Such a man may not be at heart dishonest. Let us try to follow his mode of reasoning. He begins by contrasting his own small fees and modest income with those currently reported of the specialist or surgeon. "Why should I not receive a suitable commission for the business I can control? There are plenty of skilful men who are willing to divide their fee with me. The patient is well served. Who, then, can complain?" Such a man belongs in business, not in a profession. He regards the patient as something in which he has personal or property rights, as a marketable commodity, which he is at liberty to dispose of to his own best advantage. He does not state it to himself in this way, for if he did he would see his error. But when such a principle of action is once adopted the interest of the patient is no longer his chief concern, but his own pocket.

There is yet another form of medical grafter who exacts from the apothecary a percentage of the receipts from his patient. "Perfectly legitimate," he says to himself; "I can command so much business, why should it not be worth something to me?" Soon, however, his interest is not that his patient obtains the best quality of drugs, accurately dispensed, but that his prescriptions are filled by the apothecary who promises him the largest percentage.

Why have I taken your time to rehearse this unsavory tale of greed and selfishness masking itself under the cloak of professional service? Chiefly that I may warn those who have not yet begun their professional work of certain temptations they are sure to encounter. Let those of you who have never felt the pressure of financial straits be charitable and let those who have be watchful.

ALTRUISM.

Something more is expected in professional life than in business. Be he lawyer, teacher or physician, his first, his whole interest, should be that of his client, his student, his patient. The physician starts out in life to serve his fellow-men, and the better the service he can render, the greater his success; but the moment he comes to place his own interest above that of his patient he is lost. He has yielded to the same temptation as that which has brought disgrace and wrecked the reputations of many other men in positions of trust and responsibility in the business world.

When Napoleon III, in an interview with Pasteur, expressed surprise that he should not try to turn his discoveries to a source of profit to himself, Pasteur replied that in France a scientist would consider that he lowered himself by so doing; that a man of science would complicate his life and risk paralyzing his inventive faculties if he were to make money out of his discoveries. His time would be too much occupied to be free for new investigations.

Such has always been the spirit of the great minds in medicine. Let us be thankful for this *un*commercial spirit which has been and is still the glory of our profession; which has given the results of its labors freely and without stint for the benefit of humanity; which has scorned to keep secret any discovery or to protect by patent any operation, instrument or device for the cure of disease. There is no antidote for commercialism like the love for science. If this is preserved, that can not flourish.

We constantly hear the statement that made medical science is losing its hold on the public. When one witnesses the extent to which quackery in one form or another flourishes, he may perhaps be disposed to believe that such is the case. I am inclined to think, however, that as a profession we get from the public about what we deserve, and if it be really true in any community that medicine is not held in so high esteem as it once was the principal reason is not lack of skill or scientific training, but because we have departed from the traditions of our fathers and have come to adopt lower ethical standards. It is to me always interesting and instructive to hear persons discuss their family physicians. The highest praise which can be pronounced and the one fact on which they dwell with the greatest satisfaction is that he can be trusted; that he can always be depended on to do his best in every emergency, but that he will not take risks in attempting what he is not competent to do. What avails the other qualifications of the physician if he has not been able to establish this feeling in his patient?

ELEMENTS OF A SUCCESSFUL CAREER.

The dangers which attend professional life are many. The road to honor and success has many pitfalls which are at times difficult to see and avoid. At the very beginning of his career the young professional man should definitely settle a few things, such as what is to be his chief aim and what his standard of success. Permit me to suggest for your adoption three general principles or rules for guidance in your professional life. The first concerns your attitude toward your work; the second, your relations to your patients; the third, your relations to your colleagues in medicine.

Love Your Work.—The physician's attitude of mind toward his work goes far to determine his enjoyment of it. His cares are many and his responsibilities great; the drudgery of his work soon becomes wearisome, unless in all and through all he can keep his scientific interest in his profession. He must love his work if he would succeed in it. He may not retain through life all of his early enthusiasm, but as long as he lives he should be a student of medicine. It is only this interest, coupled with the thought that he is rendering helpful service, which lifts the practice of medicine above the treadmill of routine and brings genuine satisfaction and happiness in the midst of arduous labor.

Serve Your Patients.—The rule which should govern a physician's relation to his patient, although at times difficult of application, may be stated in a few words. He should always act in the best interest of his patient. Under no circumstances should he allow self-interest, expediency, or, in fact, any other motive to influence his judgment or his action. This principle once accepted, he can seldom go wrong; but if a firm stand is not taken at the outset, and if other considerations are permitted to weigh in his mind, little by little he may come to lower his ethical standards until he finds himself drifting in dangerous waters where shipwreck is only a question of time or circumstance.

Treat Your Professional Brethren Generously.—The rules by which the relations of a physician to other members of his profession should be determined have been in the past a subject of much discussion. At different times various codes have been drawn up which have attempted to formulate proper rules of conduct. The relationships of physicians to one another may be and often are among the most delightful known, whether they meet in associations for scientific discussion or as

fellow-workers in the great cause of helping humanity. They form a sort of guild or brotherhood all over the civilized world. There is among them a sympathy, a spirit of fraternalism, which all who have known it must pronounce as one of the greatest joys of life. Such the physician's relations may be; everywhere such they have always been among the great souls of our profession.

But it is humiliating to admit that, owing possibly to the very personal character of the competition in the practice of medicine, the feeling of rivalry between physicians too often predominates over every other sentiment. Even without deliberately intending to do so, they readily yield to the temptation, by unkindly and unfraternal criticism, to undermine the influence and to injure the reputation of their colleagues. In smaller places, particularly, where each man works most of the time by himself, the petty jealousies of physicians are very common, but most undignified and unworthy.

Nothing does so much to weaken the influence of the profession as this spirit. The public has no patience or sympathy with it. If the physician's outlook were a larger one, his interest in science greater, this could not endure. He should cultivate a liberal attitude and, conscious of his own mistakes, be charitable toward those of his fellows. This generous spirit always begets generosity; while the man who always stands on his dignity, ever watchful lest his rights are encroached on, finds himself with a grievance most of the time. In all intercourse with others of his profession there is only one rule for the physician's guidance, viz.: to act toward them as he would wish them to act toward him.

CONCLUSION.

I have pointed out some of the tendencies and alluded to some of the dangers which to-day threaten medicine as a profession. Its future glory or shame rests largely with you who are the students of to-day. See to it that you always stand for the dignity and honor of your profession. If the physician's life is a strenuous one, its rewards are many and are within the reach of every one who with diligence and unselfishness will seek to serve his generation. It is the law of the moral universe that there are no short cuts to knowledge, no such thing as ready-made experience, and no counterfeit for character. Real and lasting success rests now, as always, on honest work and personal worth; or, as Lowell has put it,

> "God's price is high; but nothing else
> Than what He sells, wears long."

14 West Fifty-fifth Street.

MULTIPLE NEURITIS SIMULATING PROGRESSIVE MUSCULAR ATROPHY.

WITH REPORT OF CASES.*

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Although multiple neuritis and progressive muscular atrophy both have their pathology in the lower neuron, for clinical diagnosis and treatment it is necessary to differentiate between disease of the peripheral nerves and that resulting from anterior horn degeneration. The ordinary type of polyneuritis with sensory disturbances: hyperesthesia followed by anesthesia, tenderness of muscles and nerves, combined with absent tendon reflexes, flaccid paralysis, atrophy and reaction of degeneration, will rarely cause difficulties in diagnosis. It is quite different when the neuritic processes are very extensive, when sensory symptoms are either absent or insignificant, and when muscular atrophy is found over large territories.

We have been taught to study the distribution of muscle atrophy in such cases and authorities agree that in progressive muscular atrophy the muscles are usually affected according to their physiologic grouping in the cord, while in peripheral neuritis muscles are seized that have a common innervation regardless of segmental grouping.

This rule only holds good in the majority of instances, for cases of peripheral neuritis occur in which the atrophies seem to have a distribution identical with that found in progressive muscular atrophy.

It is well to remember that cases of progressive muscular atrophy of the spinal type are rather rare and that pathologic examination has proved many a case of supposed spinal atrophy to be a neuritis.

Notwithstanding the growing tendency among modern writers to classify neuritis with anterior horn disease under "neuronitis" or lower neuron disease, it seems advisable to adhere to the old classification, because the latter compels a more minute clinical analysis, which is quite helpful in prognosis and treatment.

In the following cases of (1) alcoholic polyneuritis, (2) lead paralysis and (3) progressive muscular atrophy, a similarity and even identity of symptoms will be noted. They demonstrate among other things the futility of attempting to diagnose a case from a mere objective examination, and emphasize the necessity of studying the etiology and course of the disease.

CASE 1.—A. B., aged 30, bartender, married, gave a negative family history and an uneventful personal history; he had measles, appendicitis, and an operation for gallstones several years ago. For nine years, while a bartender, he consumed ten glasses of beer and three of whisky daily, and, in addition, indulged in a monthly "spree." Venereal infection is denied and there were no evidences of lues.

Present History.—About three years ago he noticed a slight wasting of both thenar eminences and a deepening of the interosseous spaces, followed by general weakness in the hands and arms, and double wrist-drop within one and one-half months from time of onset. The condition in the upper extremities was progressive, so that at the end of a year he was unable to lift the arms above the level of the shoulders and his hands were practically powerless. With the exception of occasional attacks of vomiting followed by exhaustion, no other symptoms were complained of at that time. There were neither pains, paresthesias, nor muscular twitchings in the parts affected; nor were there palsies in any other parts of the body. At various times he made attempts at abstaining from alcohol, but failed. About one and one-half years from the onset of the disease his feet became affected. The weakness and atrophy came on more rapidly than in the upper extremities, and was preceded by burning sensations, tingling and numbness. Within four months he lost the power of walking, and in addition suffered excrutiating pains in the epigastric region.

He then entered Cook County Hospital. Improvement occurred rapidly and within three months his pains had entirely disappeared. The muscles of the upper and lower extremities increased in volume; partial extension of the fingers became possible and he could again walk. Four months later he left the hospital to resume his occupation of bartender. He worked several weeks and indulged in alcohol as heretofore. In consequence the pains in the feet returned with their former

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

severity and within one week from the onset of sensory symptoms he was unable to stand. Five weeks later he was unable to lift the arms from his body. At about the same time his face appeared somewhat flattened and his voice seemed hoarse. In addition, there appeared weakness of the upper lip, which made exposure of the upper teeth impossible. Vision began to fail about two weeks later; objects appeared blurred, and he was unable to read. The ophthalmoscope, however, revealed a normal fundus.

Appetite was always unimpaired, there were no disturbances of deglutition, nor of the sphincters.

Examination.—Patient appeared tall and emaciated, but presented no facial asymmetry, nor pupillary anomalies. Vision was markedly diminished for distance and acuity. Slight weakness was noticeable in the upper lip and whistling had become impossible. Tongue, pharynx, larynx, and neck muscles were normal. The chest was somewhat flattened and the pectoral muscles were atrophied. The viscera were normal and the spine presented no curvatures. All the shoulder muscles had atrophied, except the trapezius. The arm, forearm and hand muscles had wasted and there was corresponding loss of power. With great effort he could still elevate the arm to the shoulder level, but was unable to hold it up for more than a few seconds. There was typical wrist-drop and the fingers were slightly clawed. The thenar and hypothenar eminences had entirely disappeared and the interosseous spaces were deepened. The grasp of the hand was without power. Flexion of the fingers was barely possible, while extension was entirely abolished. The left hand was slightly less affected than the right hand.

While the lower extremities were generally weak, the atrophies were most marked in the dorsal flexors of the feet. Coördination and sensation were normal. Superficial reflexes were present and of normal intensity. The deep reflexes could still be elicited, but were much reduced.

Examination in April, 1905, showed marked improvement in all the symptoms. The typical ape-hand was still present on both sides; also the atrophy of the lumbrical and interossei muscles. The thenar and hypothenar eminences were still wasted. The extensors and flexors of the forearm were greatly atrophied and very weak so that slight passive resistance could prevent their movements.

The arms were fairly well preserved; he could now raise them over his head. No atrophies could be noticed about the shoulder girdle. There was no wasting of any of the trunk muscles and the lower extremities were not involved, except the muscles of the anterior surface of the leg and the dorsum of the foot. The typical foot-drop still persisted bilaterally. The so-called steppage gait was well marked, so that the patient was compelled to raise his knees high in order to clear the toes from the ground. Coördination and sensation were normal. The deep reflexes, though reduced, were present in the lower and absent in the upper extremities.

After having been an assistant in the ward for several months, during which time he enjoyed good health, he left the hospital feeling well, but still presenting the picture essentially as described.

Summary.—A young alcoholic develops a painless atrophy of muscles in the upper extremities, followed about one-and-a-half years later by similar wasting and paralysis in the lower extremities, but this time with sensory disturbances. Within four months he recovers sufficiently to resume work, but two months later relapses into his former condition, and, in addition, develops neuritis in various cranial nerves. He again enters the hospital and improves in every way, except that certain atrophies remain which do not differ essentially from those commonly seen in progressive muscular atrophy.

The unusual features are a painless atrophy beginning in upper extremities, cranial nerve involvement, accession and recession of symptoms and stationary palsies and atrophies.

Cases like the one just described are not common, but J. Dreschfeld,[1] after reporting a case of typical alcoholic neuritis with sensory findings, correctly says that "though hyperesthesia and hyperalgesia are prominent symptoms in this form of alcoholic paralysis, yet both of these may be absent and the motor disturbances occupy the foreground." He reports another case very similiar to the above, with a fatal termination. "The nervous symptoms in this case," he remarks, "resembled those seen in chronic poliomyelitis, yet the history and the onset all stamp it as a case of multiple neuritis."

CASE 2.—C. R., aged 65, single, painter, with negative family history, excepting tuberculosis, entered Cook County Hospital April 6, 1905. He had measles at 16, never acquired venereal disease, and never drank to excess. His principal complaint was a so-called nasal catarrh, which caused respiratory troubles at times. At irregular intervals he suffered from attacks of gastric and intestinal colic, oftentimes accompanied by nausea and vomiting. In addition, he complains of anorexia and constipation.

Present History.—About three months ago, while at work, he suddenly felt the strength give way in his left hand. A little later he incidentally discovered that some of the muscles in the left hand and forearm appeared wasted. Later still atrophy and considerable weakness were noticed in the right hand and forearm. He experienced no pain in the muscles or nerves.

Examination.—Patient appeared poorly nourished and showed no anomalies of face or eyes. The thorax was flattened and revealed abnormal depth of the left supraclavicular fossa. Rough breathing could be heard, but no adventitious sounds. The hands and arms were atrophic; the thenar and hypothenar eminences had almost disappeared, the interosseous spaces had deepened. The lumbrical and interossei muscles had wasted. The thumbs were almost parallel with the other fingers, presenting a good example of the so-called ape-hand. The left upper extremity was more involved than the right.

The flexors of the wrist were more affected than the extensors, but both were very weak. The right arm was somewhat the stronger of the two. The right biceps was slightly atrophied; the other arm muscles seemed about normal size. The left deltoid was greatly atrophied in its middle and posterior portions; the biceps on this side showed only a slight degree of atrophy. The left trapezius and serratus muscles were both paretic and wasted, as shown by the winged scapula and the inability to raise the arm over the head. Other shoulder and trunk muscles revealed normal conditions. The lower extremities were extremely emaciated, but did not show localized atrophies.

Fasicular muscular twitchings were very marked, even in a moderately warm room. Coördination was normal in both upper and lower extremities. There were never either subjective nor objective sensory disturbances. The sphincters were normal. The superficial and deep reflexes could be elicited with ease wherever the muscles had not entirely disappeared. No electrical examination was made. Heart and urine were practically negative. The blood showed a moderate degree of anemia, but degenerated erythrocytes and basophilic granules could not be found.

Summary.—A patient presents wasting and loss of power in the small muscles of the left hand, later of the right, followed by atrophy in the forearms, and, leaving out most of the arm muscles, shows wasting of the shoulder girdle, with no noticeable disturbance of reflexes, coördination or sensation.

This is essentially a picture of the Aran-Duchenne type of progressive muscular atrophy, and yet the history of lead and the rather rapid development of atrophies must cause one to consider well before making such a diagnosis. There exists besides considerable divergence of opinion regarding the pathologic changes caused by lead; some consider lead palsy a polyneuritis, while others are equally emphatic in calling it a chronic anterior poliomyelitis, which is practically progressive muscular atrophy.

M. Bernhard,[2] for instance, reports two cases, one of subacute atrophic spinal paralysis, and a case of lead paralysis which he believed to be spinal in type. He

1. Alcoholic Paralysis, Brain, 1884-1885, p. 208.

2. Berlin. klin. Wochschr., 1878, p. 273.

argues strongly in favor of the view that lead palsy is a spinal paralysis and cites Remak and Erb in his support.

In discussing multiple neuritis, Oppenheim[3] says: "According to recent findings, pathologic examination of multiple neuritis has not only revealed changes in the nerves, but also in the cord, although the latter were rather slight. While formerly all the symptoms in peripheral neuritis were explained by the changes in the nerves exclusively, recently pathologic proof has been accumulating which shows the cord to be affected in some cases." Leyden and Oppenheim have each described such a case and so have Minkowski and Thomsen. Oppenheim concludes, that while it is impossible to localize the pathologic changes exclusively in the nerves, the poisons which cause polyneuritis undoubtedly produce the greatest damage in the peripheral nerves.

Thomas Olliver[4] speaks of lead palsy substantially as follows: "Besides the classical wrist-drop there is occasionally seen the paralysis of the Duchenne-Erb group; sometimes the paralysis resembles the Aran-Duchenne type and rarely the leg and peroneal types of progressive muscular atrophy."

A case reported by Arthur von Sarbo,[5] of progressive spinal muscular atrophy from lead poisoning occurring in a man thirty-five years of age, who had an acute anterior poliomyelitis at five years, and who had worked in lead since his thirteenth year, first in a type foundry, later as compositor. The picture presented was that of the Aran-Duchenne type of progressive muscular atrophy, but no postmortem was held. In discussing the localization of the lesion in lead palsy, that is, whether the paralysis is caused by neuritis or poliomyelitis, he concludes that we may have either neuritis, poliomyelitis or myelitis. It is as difficult to explain why in one case we have a neuritis, in another a poliomyelitis, and in a third a so-called encephalopathy, as it is impossible to give a satisfactory reason why we have in the one case arthralgias and in the other kidney disease.

Even a superficial search through the literature was sufficient to convince me that authorities differ radically in their views on the subject. It was therefore most favorable to our purpose that a postmortem examination could be had. About one week prior to his death the patient developed an obstinate cough and irregular temperature ranging from 99 degrees to 102 degrees. Large and small râles could be heard over his chest, particularly over the right side, while the left showed absence of breath sounds and dulness on percussion. During this fatal illness the pulse and temperature did not rise above 112 and 102 degrees, respectively; there were 35 respirations to the minute. The patient died Sept. 13, 1905, and the postmortem examination was held fifteen hours after death.

The results, in brief, were as follows: Numerous old fibrinous adhesions of both pleuræ; the right pleura showed fresh fibrinous adhesions and about two ounces of straw-colored fluid containing flakes of fibrin. Consolidation of the left lower lobe and a bronchopneumonia in the right lower lobe; chronic interstitial nephritis; fibrous myocarditis; atheroma of aorta; passive congestion of liver and hydatid cyst; chronic interstitial splenitis; hypertrophic gastritis; healed tuberculosis in left apex of lung. No macroscopic changes were noted in brain, cord or nerves.

Pieces from various cord levels and from the sciatic, median and ulnar nerves were hardened and treated with Nissl, Marchi, Weigert-Pal and hematoxylon-eosin stains.

The microscope showed no degeneration of white columns and no shrinking of anterior horns. The Nissl bodies stained well with toluidin blue and no pathologic arrangement of the granules could be observed. There was an unusual amount of pigment in the cells and the vessels of the cord were moderately sclerotic.

No apparent differences could be seen on comparing sections with those of a normal cord. It was only on reaching the peripheral nerves that distinct pathologic changes were discovered which could be summarized as parenchymatous degeneration. In other words, the most important finding was a multiple neuritis which, of course, was rather a surprise, as the symptoms led one to expect cord involvement as well.

It is not the object of this article to enter into a discussion of the pathogenesis of multiple neuritis, but it may not be amiss to state that considerable obscurity still exists even in the interpretation of the pathologic anatomy of this common disorder. Some emphatically deny central disease, except as an extension of peripheral disease, while Erb[6] and others consider all nerve changes a result of disease of the trophic centers, whether this can be demonstrated microscopically or not.

Most observers, however, maintain that while pathologic changes have been detected in the spinal cord and anterior roots in some cases, the great majority of cases of multiple neuritis present no such changes.

CASE 3.—Z. D., German, aged 40, single, entered Cook County Hospital, Oct. 26, 1905. He gave a good family history, but stated that an elder brother had a complaint similar to his, from which he completely recovered thirteen years ago, and had remained well to this day. This brother was an alcoholic and received treatment by hypodermic medication (strychnin?). The case was probably an alcoholic polyneuritis.

The patient had been a car cleaner, was always sparing in the use of alcohol and tobacco, and had never worked in lead nor arsenic. No serious illness was recorded and he denies venereal disease.

Present Illness.—About three years ago he suddenly experienced pain in the right hand which lasted a few hours and then disappeared, to return in about six months, but this time it appeared in the right shoulder and arm. It came at irregular intervals and lasted from a few minutes to an hour and a half. One month later a decided weakness was noticed in the right arm, and three months later considerable wasting. He was positive that the atrophy began in the shoulder muscles and spread to the arm and forearm, and, finally involved the hand. One year after the beginning of the disease on the right side the left side became similarly affected. About six weeks ago wasting in the lower extremities was noticed, but he never experienced pain in them. Nine months ago fibrillary twitchings were first seen in the muscles of the left arm. Until a year ago he was still able to work; but at that time an extreme weakness in the hands compelled him to seek a hospital, where he remained for five weeks and then made another attempt at work. In this he was unsuccessful and then he entered Cook County Hospital for the first time. He stated that at the time of entrance his left arm was considerably stronger and his right arm in same condition as at present. After a month's stay there he was transferred to the Dunning Hospital, where he received hypodermic injections of strychnin for about five months. He is certain that this treatment caused the muscles to increase in volume and he gained sufficient strength to resume work. At the end of four months he relapsed into his former condition, was treated at home for three months, and again entered Cook County Hospital, at which time he first came under my observation.

3. Berlin. klin. Wochschr., 1890, p. 546.
4. Gaulstonian Lectures, 1892.
5. Deutsch. Ztschr. für Nerven., xix, 249.
6. Neurol. Centrbl., 1883, No. 21, p. 484.

Examination.—The man was slightly emaciated, with arms dangling; he was seen to drag his right foot. The difficulty appeared to be in clearing the toes from the ground, and there was a good example of steppage gait. The face showed no anomalies, eyes reacted to light and to accommodation, and the fundi were normal; the tongue could be protruded in a straight line. An examination of viscera and excretions, including urine, gave normal findings. Blood examination gave the following results: Erythrocytes, 4,800,000; leucocytes, 11,000; polymorphonuclears, 85.8 per cent.; mononuclears: small, 7.6 per cent.; large, 6.5 per cent.—practically normal figures, except for a slight leucocytosis.

Muscular system: Arms, forearms, shoulder-girdle, thenar and hypothenar eminences had wasted. The deltoids, supra- and infraspinati had entirely disappeared. Pectorales, latissimus dorsi and the gluteal muscles were atrophic, the right gluteal group more than the left. All the muscles showed marked fibrillary twitchings. The cranial nerves were not involved. Hands, arms and shoulders were almost powerless. Adduction and abduction of fingers was abolished, demonstrating paralysis of lumbrical and interossei muscles. The grasp of the right hand was almost *nil* and that of the left was only slightly better. Supination of the hands was impossible; pronation was barely possible in the right hand, though slightly better in the left hand. Arm and forearm flexion could not be accomplished. Extension of right forearm was impossible and was very weak in the left. The arms could neither be abducted nor adducted. The left shoulder could be slightly elevated, but not the right. All movements were better executed on the left side. The legs showed considerable loss of power, the right more than the left. Flexion and adduction were stronger than extension and abduction, although both kinds of movement were extremely weak. Head and neck muscles were unaffected and also the erectores spinæ, but the abdominal muscles were paretic.

Sensation: The touch, temperature and pain senses were unimpaired.

Coördination: Normal everywhere; muscle and joint sense perfect.

Superficial reflexes: Present, but sluggish, except the abdominal, which was absent.

Deep reflexes: Patellars were present bilaterally, but somewhat reduced; Achilles tap gave no response; there were no Babinski, Oppenheim or Gordon signs; elbow and wrist jerks could not be elicited: masseter jerk was normal. Mentality and speech were not affected.

Second Examination.—An examination made May 10, 1906, revealed the following: Some wasting of cheek muscles, partial atrophy of sterno-mastoids; head had a tendency to fall forward owing to weakness of posterior neck muscles; thighs showed marked wasting of all muscles; adductors were least involved. The legs were generally atrophied, less on posterior surface. Respiration showed marked impairment of diaphragmatic excursion on right side. The abdomen was distended and markedly tympanitic on account of paresis of the abdominal muscles. Owing to the development of extensive wasting and paralysis of the lower extremities, the patient had now become bed-ridden. The sphincters had never been affected. Within the last two or three weeks he had several attacks of dyspnea which were rather alarming.

Summary.—Gradual wasting of muscles with subsequent paralysis, absence of objective sensory disturbances, absence of sphincter trouble; reduced reflexes, constitute a symptom-complex characteristic of spinal atrophy, especially in the absence of a history of alcohol or metallic poisoning.

Termination of Case.—While this article was in the editor's hands the patient died during one of the attacks of suffocation from which he had lately suffered. This would indicate involvement of the bulbar nuclei, besides anterior horn degeneration.

The postmortem examination will be reported in full at some later date. Up to the present, Dec. 9, 1906, only the cord has been examined and distinct shrinking of anterior horns and wasting of cell bodies have been the most important findings. The diagnosis of progressive muscular atrophy has therefore been verified.

It will be observed that the symptomatology of this case does not differ materially from the cases reported in the beginning of this article. Pain was a first symptom; there was some improvement; then came a relapse; and altogether the course was rather somewhat subacute.

CONCLUSIONS.

1. Clinically, multiple neuritis may simulate a spinal atrophy as regards distribution of paralysis, absence of sensory symptoms and protracted course.
2. Progressive spinal muscular atrophy may resemble multiple neuritis in the presence of pain, remission of symptoms and subacute course.
3. Etiology and course are still our best guides in the clinical diagnosis of the various muscle atrophies.

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SOME LEGAL PHASES OF THE "PATENT MEDICINE" QUESTION.*

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Taking the expert testimony, which has been presented on the question under consideration, to be a substantially correct statement of the facts, and conceding, in fairness to the prisoners at the bar, the "patent medicine" men, that these witnesses, filled with zeal as to the merit of their case, have perhaps gone further than the court, in the impartiality incident to its position, would go in its findings of fact, there can be no question, in the minds of those untrammeled by self-interest, that the "patent medicine" business, as exploited to-day, is a serious evil.

That the methods frequently employed for the purpose of inducing the public to buy these remedies are positively dishonest and fraudulent, and that the remedies themselves are in many instances of no medicinal value, can not be questioned.

Leaving for the moment the more serious phase of the question, the harmful physiologic effects which naturally follow the use of many of them, the fraudulent nature of the business, when existing in the case of any remedy, affords ample justification for the prohibition of its sale, and the punishment of the agency responsible for it, by the exercise of public authority. Nor is the defrauded purchaser remediless, though, as I shall attempt to show, any action on the part of the injured individual can have little effect in correcting the abuses incident to the business.

PRESENT LEGAL REMEDIES INADEQUATE.

When fraud has been practiced, and the purchaser has been induced by deception to buy a worthless article, and the only loss he has suffered has been to his pocket, his damages would, of course, be limited to the price paid for the article. In such cases the expense and difficulty of securing legal redress, in practically every instance, would be so far in excess of the relief sought, that resort to such measures would, of course, be foolhardy, as the time of courts and men is too valuable to be taken up with such trivial matters as the price paid for a bottle of medicine.

The same is true as to the legal remedy of an individual for damages suffered by reason of the failure of a "guaranteed" article to cure. Rarely are these guarantees framed with the idea of creating, nor do they often

* Read before the Winnebago County Medical Society at Oshkosh, Wis., Nov. 15, 1906.

create any liability. When they are so drawn that a legal liability can be construed out of them, it is so weighted with conditions, which must be observed by the person using the remedy, that the requisite particular combination of circumstances necessary to create such liability could rarely, if ever, exist. And in cases in which there is a positive guarantee to refund the money if the purchaser is dissatisfied after using the contents, or, as is usually the case, a specified portion of the contents, rarely does the purchaser come back for his money, and for obvious reasons; he may think he has not given it a fair trial; Nature may have corrected his condition of ill-health, or, as is usually the case, he deems it too trivial a matter to warrant the expenditure of the effort involved in getting back his money, with its attendant humiliation. When the money is refunded, the loss of the profit is merely charged up to advertising expense, the "guaranteed cure" advertisement and the sale of the remedy go on.

While on this phase of the subject, one of the many difficulties which presents itself, when an attempt is made legally to disprove some of the extravagant claims made by the proprietor as to the value of his remedy, is that he frequently has a formidable array of witnesses, who stand ready to testify to the beneficial results experienced by them from the use of the remedy. In many instances they are sincere in their statements and thoroughly believe they have been benefited. The causes which contribute to the correction of a condition of ill-health may be varied and numerous; it may be the remedy administered; it may be the psychologic effect on the mind of taking a remedy in which the patient has faith, based on the testimony of others or the claims of the manufacturer; it may be that natural processes have corrected the trouble. The effects, in particular cases, of many of the various forms of medical treatment are incapable of positive demonstration, by reason of the fact that we have no means of knowing how the patient would have come out in the absence of such treatment. The natural conclusion, however, of the ordinary individual, taking a particular medicine for a particular condition of ill-health, is to attribute improvement, if it result, to the remedy, rather than to something else. Hence the difficulty of disproving many of the extravagant claims as to cures effected, based, as they often are, on opinions, which, though truthfully held, may have no foundation in fact. Cases doubtless exist in which substantial damages might be recovered against the manufacturer of a nostrum, from the use of which in accordance with the published directions death or injurious physiologic effects have resulted. Liability in such cases, however, is greatly limited by the extreme difficulty of proving that the injury is the natural result of the administration of the remedy, uninfluenced by other causes, that the prescribed dose was taken and all directions were followed. And, further, there is frequently great inequality in the power of the respective litigants to carry on a lawsuit to a successful termination. In the greater number of instances the party seeking redress belongs to the poorer class, while the manufacturer of the remedy is well equipped with the means to fight a legal battle.

There are, it is true, a few cases of this kind in the books, in which damages have been so recovered, but, so far as practical results go in the way of any general correction of the abuses incident to the traffic, any legal remedy the individual may have for damages to body or purse is utterly ineffective. Nor are criminal prosecutions of much, if any, more effect, on account of the increased difficulties of satisfying the requirement of proof beyond a reasonable doubt, instead of proof by a preponderance of the evidence, as in a civil action.

So far as any of the legal remedies mentioned are concerned, it seems to me that it is useless to expect from them any adequate relief, nor is it possible to formulate any law which can have any great general effect, if its application is limited to the correction of the mischief or the punishment of the offender, after the damage is done. The only practical line along which effective work can be done is along the line of limitation of the sale of remedies, demonstrated to be worthless or injurious, by means which will protect the public from the imposition of the fraud and the possibility of injury from their use.

THE NEWSPAPER AND "PATENT MEDICINES."

The newspaper is denounced, and deservedly, as one of the chief agencies responsible for the extent and prevalence of the evil. In a sense, the moral responsibility of the publisher, who, for a consideration, sells to another the means by which fraud and perhaps crime can be perpetrated and the accomplishment of these purposes made easy, is greater than the responsibility of the originator, in that the former uses the vantage of his position, by reason of which he can easily reach the ear of the multitude of his fellow-men, to their undoing and his profit.

In principle, there seem to be no reasons why a publisher, knowing the falsity of an advertisement, or aware of the consequences which may naturally be expected to follow the use of an article advertised, should not be subjected to the same liability as the proprietor himself, on injury resulting to a person induced to use such article, by reason of an advertisement for which the publisher is responsible. In such cases, the publisher becomes a party to the fraud or crime, and the agent of the principal and, as such, responsible for the consequences of his wrongful act. We have, however, seen the practical difficulties which attend attempts to secure damages against, or to punish the proprietor, and when we add to these difficulties the additional one of proving guilty knowledge on the part of the publisher and of fixing responsibility on any one of the numerous heads of the modern newspaper, the inadequacy of any such remedy, granting that it exists, becomes at once apparent.

I have made a somewhat diligent search of the books, but have failed to find any case reported in which a publisher has been held liable for damages resulting from a false advertisement, or punished for the publication of matter, unless the same came within the definition of matter the publication of which was prohibited by some statute or ordinance. There can be no question that the police power of the state is sufficiently broad to prohibit the advertisement of articles and matter injurious to health and subversive of good morals. Many of the states, including Wisconsin, have statutes prohibiting, under heavy penalties, the publication of obscene matter, or matter tending to corrupt good morals. We also have a statute prohibiting the publication of any newspaper or publication devoted principally to criminal news, police reports, etc. Many of the states have enacted statutes prohibiting the advertisement of articles or means for procuring abortion. The state of Washington, in 1905, passed a law prohibiting advertisements for the treatment of "venereal" diseases, and of remedies for such

diseases. In Germany, newspaper advertisements are subject to stringent regulation. An article in THE JOURNAL of the American Medical Association, Nov. 25, 1905, states that, in 1903, the confederated states of Germany formulated a list of secret remedies, the advertisement of which was prohibited. Some of the manufacturers then changed the names of their preparations and advertised them under the new names. Suit having been brought against one in Prussia, and one in Baden, it was decided by the Prussian court that, the name having been changed, the article could be advertised, the prohibition applying only to the advertised name; the Baden court held the product to be the thing prohibited from advertisement, and that changing the name made no difference. Even under the Prussian ruling the law should, it seems, prove effective, as it is the name rather than the composition of these articles that sells them. So far as legal measures are concerned, it seems that regulative and prohibitory measures, directed against the publication of advertisements of such articles as can be proved of fraudulent character or injurious to health, will prove the most effective.

The public is coming to understand that liberty of the press does not mean license to publish anything the publisher may see fit to put into his columns, but that the liberty of the press, protected by constitutional guarantees, is subject to the modification that such liberty shall not be used in such a way as to interfere with the proper exercise by others of their own rights. Freedom of speech and press does not include abuse of the power of tongue or pen any more than does freedom of action sanction abuse of one's powers to the injury of another in the enjoyment of his equally fundamental rights, the lawful use of his property, and the pursuit of happiness in the legitimate exercise of his occupation or business. The moral responsibility of publishers who take advantage of the public nature of their business and of the vast power thus given them to defraud the public, is becoming more and more generally recognized, and when the recognition of such responsibility becomes sufficiently extensive, and the public arrive at an appreciation of the extent to which it is abused, the resulting public sentiment will soon crystallize into measures and laws of no uncertain nature to check and limit the evil.

WORK OF THE POSTOFFICE DEPARTMENT.

Perhaps the most potent agency which has been found to deal with the subject has been the postoffice department, which, through its power to issue fraud orders, has put out of business countless fraudulent schemes, depending for their successful accomplishment on false and misleading published matter. Section 3929, Revised Statutes, U. S., provides that the postmaster-general may, on evidence satisfactory to him that any person or company in conducting any scheme or device for obtaining money or property of any kind through the mails by means of false or fraudulent pretenses, representations or promises, instruct postmasters to return to senders all mail addressed to such person or company, stamped "fraudulent," and to deny to such person or company the use of the money order department.

The United States' statutes further provide that certain matter shall be non-mailable. By the enactment of the simple statute that no matter advertising or concerning a lottery or similar gift enterprise should pass through the United States' mails, lotteries were put out of business. The United States laws further provide that no letter, postal card or circular concerning schemes devised for the purpose of obtaining money or property under false pretenses shall be carried in the mails. They do not, however, specify that the advertisement of any such scheme shall be barred from the mails, as is specified in regard to any advertisement of a lottery and certain other matters. Obscene or indecent publications, articles designed or intended to procure abortion or to prevent conception, articles intended for any indecent or immoral use, and any advertisement or notice of any kind, giving information directly or indirectly, where or how, or of whom, or by what means, any of such articles may be obtained or made, are declared by United States laws to be non-mailable matter, and heavy penalties provided for their violation.

The constitutionality of these statutes as abridging the freedom of the press has been assailed, but they have been held constitutional, and it has been held that the power of congress to establish postoffices and postroads gives it the power to designate what may, and what may not, be carried as mail, and when the circulation of the publication is not prohibited in other ways, but the government merely declines to become an agent in the circulation of matter which it regards as injurious to the people, and when the exclusion applies equally to all, the court holds these statutes do not deny to the owners or publishers any of their constitutional rights.

Under the law as it stands, it hardly seems that the postoffice department has the power to issue a fraud order against a newspaper merely because it contains an advertisement concerning a fraudulent scheme, or that such newspaper becomes non-mailable under the provision referred to because it contains such advertisement. Much effective work has, however, been done by means of these provisions of law.

THE PURE FOOD LAW.

The Food and Drugs Act, passed June 30, 1906, another most important piece of legislation, provides that the shipment from one state to another, or from any foreign country, or to any foreign country, of articles which, within the meaning of the law, are misbranded, is prohibited. In case of drugs they are considered "misbranded" if the package fail to bear a statement on the label of the quantity or proportion of any morphin, opium, cocain, heroin, alpha or beta eucain, chloroform, cannabis indica, chloral hydrate or acetanilid, or any derivative or preparation of any such substances contained therein. The term "misbranded" also applies to all drugs, the package or label of which shall bear any statement, design or device regarding such article or the ingredients or substances contained therein which shall be false or misleading in any particular, and to any drug product which is falsely branded as to the state, territory or country in which it is manufactured or produced.

THE WORK OF THE INTERNAL REVENUE DEPARTMENT.

Another important measure is the ruling of the internal revenue department, under Circular 673, that all medicines which contain alcohol, unless mixed with substances undoubtedly medicinal in character in sufficient quantity to give a medicinal quality to the liquor other than that which it may inherently possess, shall be regarded as liquor and require of the person selling them a revenue license.

WISCONSIN STATE LAW.

Section 4601c, Revised Statutes, Wisconsin, provides penalties for the sale of, or the having in possession with

intent to sell, any medicine known as patent or proprietary, or of which the formula is kept secret by the manufacturer, which contains morphin, strychnin, cocain or poisonous or narcotic alkaloid or drug, in any quantities which the state board of health shall deem harmful to the life or health of the public, unless the presence of the same be distinctly shown by a label on the bottle or package and on the outer wrapper thereof. Many of these measures are of comparatively recent origin, and it seems probable that the near future will see them supplemented and added to in various ways which will make them more effective.

So far as I have observed, the public discussion of this question, in the magazines and otherwise, has been singularly devoid of practical suggestions as to methods of relief other than such as may result from a general understanding of the facts, whereby it is claimed that the newspapers, by reason of the force of public opinion, will in time be obliged to purge from their columns objectionable advertising matter.

SPECIAL NATIONAL LEGISLATION SUGGESTED.

While much can doubtless be accomplished through this means, there is much merit in the publishers' position that it is practically impossible for them to determine intelligently what advertisements are meritorious and proper and what are not. While in many instances the facts can be easily obtained, in others the misleading, false or harmful nature of the advertisement comes to light only after careful investigation. In cases of doubt it is natural that the self-interest of the publisher is apt to decide in favor of accepting the questionable advertisement. It is probably too much to expect of publishers, actuated by motives of self-interest, that they will act with the same disinterestedness as an agency in which that element is not present. Thus it seems to me desirable that some responsible governmental agency be empowered to determine whether, in the case of any article, improper methods are used in its public advertisement.

It would also seem desirable that, if possible, the sphere of this agency's operation should be national in its scope rather than limited to a state. In view of its success along similar lines, the postoffice department seems to be the one most adapted for the purpose of securing the end sought. As we have seen, congress has declared certain matters non-mailable; but the only instance in which it has specifically declared that a newspaper or publication is non-mailable by reason of its containing the advertisement of an article is in the case of lotteries, although by Section 3893, Revised Statutes, U. S., it is generally provided that any written or printed card, letter, circular, book, pamphlet, advertisement or notice of any kind giving information, directly or indirectly, where or how, or of whom, or by what means certain specified articles can be obtained or made, shall be non-mailable, such articles being as follows: Every obscene, lewd, or lascivious book, pamphlet, picture, paper, letter, writing, print, or other publication of an indecent character, and every article or thing designed or intended for the prevention of conception or procuring of abortion, and every article or thing intended or adapted for any indecent or immoral use.

Let the definition of non-mailable matter be extended to include newspapers and publications containing advertisements of articles which are being publicly advertised, through the mails, by means of false pretenses, representations or promises, or which from their nature are injurious to the life or health of the public. Give to the postoffice department, on its appearing that an article is being so advertised, or that the article advertised is of such harmful nature, the power to make a ruling that any publication containing an advertisement of such article shall be denied the use of the mails, appropriate penalties being provided for any violation of the law.

Make the rulings of the department subject to review by the courts, and afford to persons against whom the rulings may be directed proper safeguards to guard against injury from the improper exercise of such power. Proper provision should also be made for the publication of such rulings in such manner as will give adequate notice thereof to publishers before the imposition of any penalty.

It might also be provided that the ruling shall not go into effect until after a certain specified number of days from the time it is made, during which time the party against whom it is directed shall have the right to appeal to the court, and that, in case of such appeal being taken, the ruling shall not go into effect until passed on by the judgment of the court, but that, on the ruling of the department being sustained, the penalty provided in the law be inflicted. It is likely that the mere existence of such an agency, legally empowered to determine whether an article publicly advertised comes within the prohibited class, would do much in the way of regulating advertisements. And with proper safeguards the honest advertiser need have no fear that such a law will interfere with the free exercise of his legitimate business.

CONCLUSION.

We must not, however, expect too much of legal measures. There never has been, and never can be, enacted any law which will protect people from the consequences of their own folly. So long as mankind is constituted as it is, the fool killer will thrive and do business. But in matters so affecting the public health and welfare of society as the administration of medicine and the treatment of disease the public has a right to insist that powerful and poisonous drugs shall not be foisted on them under the guise of harmless articles; that liquor, if sold, shall be sold as such and only under proper restrictions, and that some reasonable guarantee shall be afforded that an article publicly advertised is what it purports to be, and that, if these reasonable requirements are not fulfilled, there be some sure and direct way of administering punishment on the agency responsible for such failure, be such agency the proprietor of a medicine or the proprietor of a newspaper, through whom the former is enabled to reach the public ear and confidence.

The benefits of focusing public attention on any question demanding correction can not be overestimated, as it is only in this way that the public can be brought to a realization of the facts. When this is done, when the inertia of public opinion is set in motion by an adequate understanding of the facts, the "patent-medicine" evil, like many others of greater magnitude, will find an easy solution, for it exists to-day only because the people do not understand.

Such being the case, the duty of those in positions of responsibility is clear, and the value of such work as your society is doing can not be overestimated in its effect on public opinion by directing attention to the facts as they exist.

THE OUTBREAK OF CHOLERA IN THE PHILIPPINES IN 1905.

THE METHODS USED IN COMBATING IT, WITH STATISTICS TO JAN. 1, 1906.

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According to the official records on file at the Bureau of Health for the Philippine Islands, the last case of cholera of the pandemic which commenced March 20, 1902, was reported to have occurred March 8, 1904. During that period 166,252 cases, with 109,461 deaths, were reported. Reliable observers are of the opinion that at least one additional case occurred for each one that found its way into the official records.

From March 8, 1904, until Aug. 23, 1905, no cases are known to have occurred. From time to time during this latter period suspicious cases, which clinically resembled Asiatic cholera, came to the attention of the Insular Board of Health, but the diagnosis could not be confirmed bacteriologically. For the two weeks immediately preceding August 23, the number of suspicious cases increased. In Manila, one occurred in San Pedro Macati, a suburb; one in a bakery in Paco; one in the San Miguel district; one case was that of a soldier in Cuartel de España, and several in the province of Rizal. The cases in Manila were all carefully examined postmortem, and the intestinal contents subjected to bacteriologic tests by such competent observers as Dr. R. P. Strong of the Government laboratory, and his assistants; and the case of the soldier was carefully investigated by the military medical authorities, and specimens examined at the Army laboratory which is maintained in connection with the First Reserve Hospital of Manila. From both of these independent sources the results were reported as negative.

THE FIRST RECOGNIZED CASE.

On August 23 a case developed in Bilibid prison which was a typical clinical picture of cholera. After a few hours the victim succumbed. At the postmortem examination the ileum was found to be deeply injected and filled with rice-water-like material, and the bacteriologic examination made by Dr. R. P. Strong revealed the cholera spirillum of Koch. Thus occurred the first officially recognized case of cholera of the present outbreak.

This patient was in an institution which is practically cut off from the remainder of the world; where all foodstuffs are permitted to enter only after the most rigid inspection, and where all food served, that could possibly convey cholera, is cooked at all times. On account of dysentery, it is said that all drinking water was sterilized. Therefore, it would seem that the routine precautions taken against dysentery should also have afforded protection against cholera. The commencement of an outbreak in this insidious manner was most puzzling, and the prospects of combating a disease whose origin was so obscure were not encouraging.

On the following day six cases, suspicious of cholera, were reported by Major Wales, from Fort William McKinley, which is located about seven miles up the Pasig River, from Manila. For the week preceding August 23, about eight cases, with profuse diarrhea and vomiting followed by collapse, had occurred at the fort. The symptoms were the same as those usually found in vino poisoning which is so common among the United States soldiers in the islands, and in the absence of any cholera being reported anywhere in the Philippines, there was no particular reason for investigating the cases further. In view of the fact, however, that the diagnosis of some of the later cases that occurred at the fort was bacteriologically confirmed, the earlier diagnoses of vino poisoning may not have been correct.

The military medical men at once commenced active measures, and the comparatively few days during which the cholera persisted at the fort is another excellent example of how readily the disease can be eradicated when sanitary principles are intelligently applied.

On August 25 an American woman residing at the Grand Hotel, in the walled city, was attacked, and died in a few hours. On the same day an American residing on San Sebastian Street, in a section of the city nearly two miles from the previous patient, was seized and died several hours afterward. No connection could be traced between the two cases, nor could any history be obtained that the same articles of food, which would be likely to convey the infection, had been eaten by these two victims.

Cases in Manila occurred as follows:

TABLE 1.

August 23	2	September 1	17
August 24	1	September 2	12
August 25	3	September 3	27
August 26	8	September 4	18
August 27	10	September 5	12
August 28	6	September 6	10
August 29	9	September 7	8
August 30	5	September 8	7
August 31	7	September 9	4
		September 10	3

From this period the cases averaged about one a day until the end of the year; the total cases, from Aug. 23 to Dec. 31, 1905, inclusive, being 255.

The characteristic tendency of the outbreak continued during the early weeks of the scourge, viz.: No connection could be traced between the cases; no two cases occurred in any one house, nor did two cases occur in any one group of houses. A case almost invariably occurred in a section of the city far distant from a previous case, and furthermore, it will be noted that the next case did not occur in the same section until the likely incubation period had expired. Another especially noteworthy feature about the outbreak is that while the greatest number of cases occurred in the slum district, this section of the city was not infected until during the latter part of the outbreak.

At the commencement of the epidemic of 1902, cases in Manila were reported as follows:

TABLE 2.

March 20	4	March 30	11
March 21	6	March 31	6
March 22	4	April 1	17
March 23	8	April 2	4
March 24	14	April 3	13
March 25	15	April 4	13
March 26	12	April 5	9
March 27	11	April 6	11
March 28	6	April 7	9
March 29	5		

By comparing this table with Table 1, it will be seen that at the end of the second week there had actually been more cases during the outbreak of 1905 than during that of 1902.

In the meantime, a telegram received August 26 from Jalajala, province of Rizal, through the Army Medical Department, contained the following information:

Cases of a disease resembling cholera have developed in Jalajala, the first case being registered on the 21st; from that

date to the 25th, 16 cases and 12 deaths have been registered, the illness lasting from twelve to twenty-four hours.

On August 26 another telegram, received from the president of the Provincial Board of Health at Pasig, reported one suspicious case followed by death, in that town. A representative of the Insular Board of Health, and another from the Bureau of Government Laboratories, proceeded at once by special launch to Pasig and Jalajala, for the purpose of investigating the cause of the outbreak in these places. The result of this investigation did not shed any light on the origin of the infection. Inquiry made by the inspectors only resulted in showing that at least one week prior to August 23 more deaths had occurred in Jalajala than usual, and that the victims had profuse diarrhea and died a few hours after the symptoms manifested themselves.

An investigation made by Dr. L. T. Hess, captain and assistant surgeon, United States Army, of the records on file at Muntinlupa and Biñan, situated in Rizal and Laguna provinces, respectively, and on the opposite shore of Lake Laguna from Jalajala, showed that death certificates had been filed during the week preceding August 23, for a number of cases (less than 12), in which the cause of death was given as "suspicious diarrhea."

The following table will show the order in which other towns in the provinces became infected and the number of cases up to Jan. 1, 1906:

TABLE 3.

Town and Province.	Date of first case.	To January 1, 1906.	
		No. of Cases.	No. of Deaths.
1. Jalajala, Rizal	Aug. 20	28	18
2. Guadalupe, Rizal	Aug. 24	1	1
3. Taguig, Rizal	Aug. 25	68	51
4. Pasig, Rizal	Aug. 27	59	47
5. Santolan, Rizal	Aug. 28	1	1
6. San Pedro de Macati, Rizal	Aug. 28	4	4
7. Taytay, Rizal	Aug. 29	132	115
8. Guagua, Pampanga	Sept. 1	37	26
9. Indang, Cavite	Sept. 1	1	1
10. San Mateo, Rizal	Sept. 2	16	12
11. Malabon, Rizal	Sept. 2	53	50
12. Bulacan, Bulacan	Sept. 4	12	8
13. Sangley Point, Cavite	Sept. 5	1	1
14. Pasay, Rizal	Sept. 5	1	1
15. San Felipe Neri, Rizal	Sept. 5	1	1
16. Pila, Laguna	Sept. 7	7	6
17. Cavite, Cavite	Sept. 7	22	20
18. Paranaque, Rizal	Sept. 8	1	1
19. Santa Rosa, Laguna	Sept. 11	9	8
20. Mariquina, Rizal	Sept. 13	4	3
21. Binangonan, Rizal	Sept. 16	60	29
22. Morong, Rizal	Sept. 16	186	116
23. Antipolo, Rizal	Sept. 17	56	35
24. Meycauayan, Bulacan	Sept. 23	1	1
25. Los Banos, Laguna	Oct. 2	19	14
26. Imus, Cavite	Oct. 3	159	116
27. San Francisco de Malabon, Cavite	Oct. 5	12	11
28. Carmona, Cavite	Oct. 6	1	1
29. Caloocan, Rizal	Oct. 13	4	2
30. Lucban, Tayabas	Oct. 12	4	4
31. San Pablo, Laguna	Oct. 18	1	1
32. Binan, Laguna	Oct. 16	111	92
33. Pagsanjan, Laguna	Oct. 20	3	2
34. Paete, Laguna	Oct. 21	3	0
35. Naic, Cavite	Oct. 21	48	45
36. Bay, Laguna	Oct. 22	1	1
37. Santa Cruz, Laguna	Oct. 23	41	37
38. Majayjay, Laguna	Oct. 24	15	10
39. Cabuyao, Laguna	Oct. 28	2	2
40. Calamba, Laguna	Oct. 31	64	43
41. Hagonoy, Bulacan	Nov. 1	197	139
42. Noveleta, Cavite	Nov. 1	77	40
43. Macabebe, Pampanga	Nov. 6	9	7
44. Magdalena, Laguna	Nov. 6	4	3
45. Lilio, Laguna	Nov. 8	20	16
46. Nagcarlang, Laguna	Nov. 9	1	1
47. Tanauan, Batangas	Nov. 20	10	6

The cases and deaths in the city of Manila, from August 23 to December 31, were distributed by age as follows:

TABLE 4.

Age.	Cases.	Deaths.	Mortality.
Under 30 days	0	0	....
1 to 2 years	3	3	100.0
2 to 5 years	20	20	100.0
5 to 10 years	14	14	100.0
10 to 15 years	14	11	78.6
15 to 20 years	23	17	73.9
20 to 25 years	33	28	84.8
25 to 30 years	33	28	84.8
30 to 35 years	42	38	90.2
35 to 40 years	24	19	79.2
40 to 45 years	18	17	94.4
45 to 50 years	8	8	100.0
50 to 55 years	11	11	100.0
55 to 60 years	1	1	100.0
60 to 65 years	6	6	100.0
65 to 70 years	0	0	....
70 to 75 years	1	1	100.0
75 to 80 years	1	1	100.0
80 to 85 years	1	1	100.0
Unknown	2	2	100.0

The number of cases of cholera that occurred by race, between Aug. 23, 1905, and Dec. 31, 1905, and the date of the last case, are shown in Table 5. Table 6 shows the classification of cases by occupation.

TABLE 5.

Race.	Cases.	Deaths	Mortality, per cent.	Ratio of 1 Case to	Date of Last Case.
Americans	11	6	54.0	339	Oct. 10
Filipinos	220	200	90.9	862.6	Dec. 31
Chinese	4	4	100.0	5307.5	Oct. 8
Foreigners	20	16	80.0	227	Nov. 8

TABLE 6.

Occupation.	Filipinos.		Americans.		Japanese.		Chinese.		Foreign.	
	M.	F.	M	F.	M.	F.	M.	F.	M.	F.
Barber	2	..	..	..	..	..	..	..	..	..
Blacksmith	1	..	..	..	..	..	..	..	..	..
Boatman	1	..	..	..	..	..	..	..	..	..
Buttonmaker	..	1	..	..	..	..	..	..	..	..
Carpenter	4	..	..	..	1	..	..	..	..	..
Cigarmaker	2	1	..	..	..	..	..	..	..	..
Clerk	2	..	1	..	..	..	..	..	..	..
Coachman	2	..	..	..	..	..	..	..	..	..
Collector	1	..	..	..	..	..	..	..	..	..
Cook	1	..	..	..	..	..	..	..	..	..
Domestic	..	2	..	..	..	..	..	..	..	..
Draughtsman	1	..	..	..	..	..	..	..	..	..
Dressmaker	..	5	..	..	..	..	..	..	..	..
Electrician	1	..	..	..	..	..	..	..	..	..
Fireman	1	..	..	..	..	..	..	..	..	..
Fisherman	2	..	..	..	3	..	..	..	..	..
Gardener	..	..	..	..	..	..	1	..	..	..
Hotelkeeper	..	..	..	1	..	..	..	..	..	..
Housekeeper	..	5	..	..	..	..	..	..	..	..
Janitor	1	..	..	..	..	..	..	..	..	..
Journalist	1	..	..	..	..	..	..	..	..	..
Laborer	14	..	1	..	4	..	2	..	..	..
Laundress	..	9	..	..	..	..	..	..	..	..
Mason	..	..	..	..	..	..	..	..	..	..
Merchant	1	..	1	..	..	..	..	..	1	..
Messenger	1	..	..	..	..	..	..	..	..	..
Milkman	1	..	..	..	..	..	..	..	..	..
Painter	1	..	..	..	..	..	..	..	..	..
Policeman	1	..	..	..	..	..	..	..	..	..
Prisoner	29	..	..	..	..	..	..	..	..	..
Religeuse	..	1	..	..	..	..	..	..	2	..
Sailor	5	..	1	..	..	..	..	..	1	..
Silversmith	1	..	..	..	..	..	..	..	..	..
Soldier	1	..	..	..	..	..	..	..	..	..
Stonecutter	1	..	..	..	..	..	..	..	..	..
Student	4	..	..	..	..	..	..	..	..	..
Tailor	1	..	..	..	..	..	..	..	..	..
Teamster	..	..	..	..	..	..	..	..	..	..
Tendera	..	3	..	..	..	..	..	..	..	..
Trader	..	..	..	..	..	..	1	..	1	..
Water vender	1	..	..	..	..	..	..	..	..	..
Unknown	9	31	..	..	3	..	..	..	..	..
Children	20	28	1	..	..	..	..	..	..	..
Total	114	86	5	1	11	..	4	..	5	..

From Table 5 it will be seen that in proportion to their number, more foreigners (Japanese and Europeans) contracted cholera than any other nationality; that the

Americans ranked next, but had the lowest death rate, and that the least number occurred among the Chinese. The mortality of 100 per cent. among Chinese may be attributed to the fact of the very few cases that occurred, and that those patients who recovered probably escaped detection by the health authorities. That no further cases occurred among Americans after October 10 was probably due to the fact that as soon as they believed the disease to be actually present, they observed the prophylactic measures against cholera more strictly.

The high percentage of Americans and Europeans attacked may also be more apparent than real, because it is quite probable that all those persons of this race who were attacked promptly sought medical advice and thus were reported, while among the natives and Chinese, in all probability cases occurred in which the patient recovered, and thus were not reported.

In Table 7 is given the death rate per thousand for Manila, for all diseases, for the years 1903 and 1904, in which no cholera was reported. The death rate for the same months in 1905, during which period 250 deaths from cholera were reported, is also given:

TABLE 7.

	1903		1904		1905	
	Number of Deaths.	Annual Death Rate per 1000.	Number of Deaths.	Annual Death Rate per 1000.	Number of Deaths.	Annual Death Rate per 1000.
August	862	46.17	1032	55.28	841	45.03
September	1228	67.97	1064	58.89	1013	56.06
October	1217	65.19	1018	54.53	850	45.51
November	974	53.91	957	52.97	944	52.24
December	894	47.89	794	42.53	841	45.03
	....	281.13	....	284.20	....	243.87
Average	....	56.22	....	56.80	....	48.77

From the above table it will be seen that the death rate for the years in which no cholera was reported was actually higher by more than 8 per thousand than in 1905, when cholera was reported. The death rate is of particular importance, in view of the fact that an increase in the general mortality has been almost universally accepted as being a strong factor in indicating that deaths from communicable diseases were occurring. Many epidemiologists who have written on this subject in the past have laid especial stress on the fact that when a sudden increase in the death rate for a community takes place, it should be regarded with suspicion, and the possibility of a dangerous communicable disease being present, should be considered.

THE SOURCE OF THE INFECTION.

It will now be interesting to consider whether or not the infection was introduced from without, and in this connection it will be important to ascertain in what other nearby countries cholera was present at the time it made its appearance in the Philippine Islands.

Manila is in active communication, by direct steamship lines, with the following Oriental ports: Yokohama, Kobe, Nagasaki, Moji, Shanghai, Amoy, Hong Kong, Saigon, Singapore, Rangoon, Calcutta, Madras and Bombay, and indirectly, with Sourabaya and few other Javanese and Bornean ports. Examination of the official sanitary statistics received from the ports mentioned discloses the fact that cholera was present in an isolated manner in the country back of Kobe, Japan; in Calcutta and in Bombay. In the case of the two last mentioned ports, the sailing time to Manila by the most direct steamers is at least nine or ten days from Calcutta, and at least fifteen days from Bombay. The fact that the incubation period is only five days, that no sick were found on any of these vessels, and that, from laboratory experience, it has been ascertained the class of vegetables and other cargo which come from these ports will not serve as media for the growth of the cholera bacilli for a greater period than five days, shows that for practical purposes these two ports may be dismissed from further consideration. At any rate, the only importations from India are rice, onions, potatoes, textiles, ivory goods and other articles not at all likely to convey cholera organisms.

No cholera was reported in Hong Kong, and none was known to exist in Canton, but in view of the fact that the actual status of the public health in Canton is not well known at any time, that place can not be excluded with any degree of positiveness. The time from Canton to Manila, by way of Hong Kong would be at least from four to five days, but in view of the fact that only onions, potatoes, garlic and such other vegetables as are necessarily forwarded in a dry state, were shipped from these ports, it is not likely that cholera organisms could have been introduced with them; furthermore, since Canton vegetables are used freely aboard vessels which entered the Philippines from Hong Kong, and since no sick were found on these vessels, it is reasonable to exclude that port from the list of places likely to have been the cause of the introduction of the infection.

The records show that from Kobe a number of vegetables were shipped, but they consisted principally of onions and potatoes, and a very small amount of cabbage. The vessels that arrived from that port for the month preceding the outbreak of cholera in Manila did not have any cases aboard which were in any way suspicious of cholera. In view of the fact that cabbage is the only vegetable which could possibly have been the cause of the introduction of cholera, and since at least five days is consumed in the voyage, and more time must necessarily have elapsed before it could have been placed on the market, and since experiments made in the laboratory of the Public Health and Marine-Hospital Service show conclusively that cholera organism can not be kept alive on cabbage for longer than five days, this method of the introduction of the infection may also be excluded. The only other articles which are open to suspicion, imported from Kobe, Japan, are classes of food peculiar to the Japanese, and which are not eaten by other nationalities. Many of these consist of vegetables in a fermented state, which in itself precludes the probability of cholera organisms existing therein; and furthermore, since no Japanese persons are known to have been attacked in the city of Manila until the disease was present at least five days, and after more than 25 cases had occurred among other nationalities, it is not likely that the infection can be ascribed to Japanese food products.

From the foregoing it will be observed that so far as the records show, at least, it is not likely that the infection gained entrance into the Philippine Islands from without. Of course, there is always the possibility that cholera organisms may have been present in the intestines of an incoming passenger, but in view of the fact that the first cases known to have occurred were in persons known to have been in the islands many weeks immediately previous, and also, that they were not per-

sons likely to ingest foreign food, this last contingency would also seem remote.

FIGHTING THE EPIDEMIC.

In mapping out a campaign for the suppression of the disease, the work was divided into four parts:

1. Isolation of the sick in the cholera hospital, and the rigid disinfection of their houses and effects.
2. The protection of the city water supply, including the closing of wells located in the city of Manila.
3. Prohibition of the sale of foodstuffs likely to become contaminated, and the proper protection, with fly screens, of the remainder.
4. The education of the public in the precautions to be observed in order to avoid the disease.

The carrying into effect of the isolation of the sick, and their treatment at the cholera hospital, was so well organized as the result of the experience gained in the former epidemic that this particular feature worked very smoothly; but in other respects the work was attended with considerable difficulty on account of the strong antipathy of the Filipinos to be treated elsewhere than in their homes.

The native daily papers took the matter up and drew a vivid pen picture of the mental agony that would be endured by the relatives and friends of those who should be unfortunate enough to be stricken with cholera, and separated from them by being compelled to go to the cholera hospital. The direct effect of the publication of such articles was that many cases were concealed, and just so many infected centers remained undiscovered. The newspaper attacks were borne patiently, and constant endeavors made to show prominent Filipinos and the representatives of the press the magnificent manner in which the cholera hospital was equipped, and how much the chances of recovery from an attack were increased by hospitalization, and the fact was particularly pointed out of the great injustice done to the patient by depriving him of these increased chances for recovery. Fortunately, a number of well-known citizens recovered at the cholera hospital about this time, which had the effect of at least silencing the critics, after which the work of isolation was carried on with much less hindrance and with ever-increasing effectiveness.

To the American press of Manila too much credit can not be given for the manner in which it pointed out the danger that existed in concealing cases.

No attempt was made to quarantine "contacts," nor was any attempt made to institute a land quarantine at any place in the islands. This was a radical departure from the manner in which, in 1902, the campaign against cholera was conducted. The infection was followed from center to center; the sick were isolated, and every practicable measure was taken to destroy the infection and thus to prevent its spread. It is believed that this method was of more value than an attempted quarantine would have been, as the latter would necessarily have had to be too despotic to have been of any permanent value. The policy was to educate rather than to antagonize, and what has been lost in some respects has been more than compensated for in others.

By comparing the disease during this epidemic, with that of the previous one, it will be seen that the disease actually spread more slowly this time than before. To quarantine effectually the infected area in and around Manila, not to mention the provinces, would have required from 30,000 to 50,000 armed men, and unless this quarantine had been made effective, it would have been useless. The cost of maintaining such a quarantine, in the salaries for guards and delays and losses to business, would have been enormous.

It may be contended that the infection this time was milder in character, and for that reason did not spread, but when it is remembered that the mortality was over 90 per cent., and that nearly all the victims succumbed in a few hours after the first symptoms appeared, and that almost without exception the disease spread rapidly unless prompt disinfection was done, it will be seen that this contention has very little basis in fact.

The beneficial effect of not alarming the populace, and thereby causing a great emigration from the centers in which the disease appears, can scarcely be overestimated. By the plan followed, cases of cholera, instead of being carried far and wide in every direction, were confined largely to Manila, where the patients could be promptly isolated and the necessary disinfection performed; the consequence of which, of course, was that there was little danger from the spread of infection in such cases.

The one idea that was kept constantly in mind was to so arrange the inspection system that the disinfectors could reach the cases in the shortest possible time. The disinfection was made as simple as possible, and strict instructions issued that nothing must be destroyed or damaged, with the exception of the prepared food which was found in the houses; the stools of the patients and the places where they were thrown and the clothes which they soiled were diligently sought for and thoroughly disinfected with a 1 to 1,000 solution of bichloride of mercury, or a 5 per cent. solution of carbolic acid. The floors and walls were thoroughly saturated with the same solution, by means of a pump.

All containers in which water was stored, as, for instance, water coolers, earthen jars, filters, barrels, wells, etc., were treated with potassium permangante. "Contacts" were required to take an antiseptic bath. The disinfecting carts were used in much the same way as the apparatus of a fire department. The horses were kept hitched up, night and day, and as soon as a case was reported, the disinfectors reached the infected house a few minutes later. The fact that no second case occurred in any house shows most effectively how efficiently the disinfection was done.

PROTECTION OF WATER SUPPLIES.

A few days after the outbreak of cholera in Manila, a few isolated cases of the disease were carried to the water-shed from which Manila obtains its drinking water. These cases probably came from Taytay, a small town in Rizal province, located near the water-shed. The importance of properly guarding the water supply of a city of 219,000 inhabitants will be readily appreciated. Arrangements were promptly made for sending an adequate patrol to the Mariquina Valley, to prevent the pollution of the water. Through the courtesy of the Commanding General of the Philippines Division, four troops of the Eighth Cavalry were promptly ordered to the valley, and remained there until long after the time that the last case of cholera was reported. The water-shed is inhabited by about 10,000 persons, and from time immemorial it has been their custom to bathe and wash in the Mariquina River, from which the Manila water supply is drawn. To deprive them, suddenly, of this privilege produced great opposition among the people, and made it difficult for effective work to be done. For that reason, to the American troops great credit is due on account of the great patience which they exer-

cised. The fact that the river was not polluted, although many cases of cholera occurred immediately along its banks, shows most conclusively how effectively the troops carried out the duties to which they were assigned.

As an additional protection, during the time that the cholera on the water-shed was at its height it was deemed advisable to place a sufficient amount of copper sulphate in the city reservoirs to make a solution of 1 to 2,000,000. Subsequent experiments made at the laboratory with the regular city water, however, showed that a solution of at least 1 to 50,000 would be required to kill cholera organisms with certainty in thirty minutes' time. As this would be unsafe for drinking purposes, for continual use, it is of course obvious that cholera organisms can not be successfully removed from the public water supply of Manila by the use of copper sulphate.

In the city of Manila there still remain a great many wells which, ostensibly, are used only for the purpose of sprinkling streets, washing carriages and other uses; but the danger is always present that they will be used for drinking purposes, and for that reason an order was issued which directed the closing of all wells in the city of Manila.

After the large city mains were protected, and the wells were closed, it could almost be said with certainty that no large epidemic could take place in the city of Manila, and this proved to be the case.

PROHIBITION OF THE SALE OF FOODSTUFFS AND PROTECTION BY FLY SCREENS.

For one who has never seen the local native markets, it will be difficult to understand the great variety and kinds of foodstuffs that are offered for sale, and the ideal culture media which they offer for cholera organisms. Among them are snails, fish of various kinds, crabs and other shellfish, cooked vegetables, etc. There are also many green vegetables which, of necessity, must be continually watered in ordered to keep them in a fresh condition. The great amount of handling by prospective customers, which all the foods in the public markets receive, makes it clear that they are likely at any time to become contaminated by persons who are either in the incubation stage of cholera or have come in contact with infected material.

The chewing of the betel nut has long been under suspicion as being perhaps the most common manner by which cholera is propagated and continued in the Philippine Islands. The betel is prepared for chewing by extracting the kernel from the nut, which is from 5 to 8 centimeters long, with a diameter of 2 centimeters. The outer cover of the nut is a thick husk, comparable to that of the green walnut or butternut of the United States. The kernel, when extracted, is cut into discs, each of which is wrapped with a piece of moist green buyo leaf. It is in this leaf that the danger is supposed to lurk.

In order to keep the leaves in good condition, they are kept in an earthen pot and thoroughly sprinkled with water every few hours. As new supplies of the leaves are received at the markets, the old water that accumulates in the bottoms of the vessels is not always replaced with fresh water. Each prospective buyer of the buyo leaf usually fingers all the leaves that are found in the pot in order to find those which are most tender. In this way the buyo leaves in a given vessel are probably handled by different persons many times each day before they are finally disposed of, and if there is any cholera in the neighborhood it is quite easy to conceive how, sooner or later a person who has cholera organisms on his or her fingers, will come in contact with the buyo leaves. To prevent the sale and use of the betel nut and this buyo leaf is probably one of the most difficult things which the Bureau of Health had to attempt. Confirmed betel-nut chewers are almost as insistent on having their chewing material as the average opium habitué is in obtaining his supply of opium, and they will go to every possible trouble and risk to obtain it.

Street peddling was entirely forbidden. The sale of fruit that grows well above the ground, as, for instance, those fruits grown on trees, exemplified by bananas, cocoanuts, mangoes, etc., was not interfered with to any great extent. These fruits, fortunately, are not handled very much by prospective buyers, before being bought, and, therefore, are not likely to become contaminated. Some of the cheaper articles, which are absolutely indispensable to the poorer classes, were permitted to be sold, provided the shopkeeper agreed to keep the product under fly screens, and to prevent intending purchasers from handling the same.

With the aid of the police, these regulations were fairly well carried out, and perhaps aided considerably in preventing the spread of the disease.

THE EDUCATION OF THE PUBLIC IN THE PRECAUTIONS TO BE OBSERVED IN ORDER TO EVADE THE DISEASE.

Education of the public was probably the most important work that was done by the Bureau of Health, and the success in controlling the outbreak was no doubt largely due to the co-operation which was given.

In order to place something practicable before the public, something which required very little expense, trouble or knowledge to carry out, the following rules were printed in the newspapers and then issued in the form of a handbill, in English, Spanish, Tagalog, Ilocano, Viscayan, and other native dialects:

1. Boil all drinking water and place it while hot in covered vessels. Do not dip up the water when needed, but pour it into drinking cups, otherwise cholera germs may get into the water from the hands.

2. Do not touch drinking water or food with the hands unless they have just been washed in water that has been boiled.

3. Eat only cooked food. Avoid all fruits, raw vegetables, and raw fish. Dried fish may be made safe by thoroughly heating. Fruits may be made comparatively safe by dipping them a few seconds into boiling water.

4. Flies may carry cholera germs on their feet from human excreta to food; therefore, to protect it from flies, cover all food immediately after it is cooked.

5. If cholera appears, build smudges under houses to drive flies away.

6. Boil all water used for diluting milk.

7. Cook all meats and fish thoroughly so as to heat the same throughout.

8. Keep kitchen and table dishes thoroughly clean and scald them before using.

9. Keep the place in which you live, the ground under the house, and everything pertaining to it, clean.

10. Outhouses, closets, and vaults can be made safe by putting in lime or carbolic acid. When this can not be done dejecta must be buried or thoroughly covered with earth.

11. Isolate all the sick. It is recommended that a house in each barrio be set aside for this purpose.

12. All the dead should be embedded in lime and buried three feet under the surface.

13. Filth or vomit and the dejecta of the sick should be promptly cleaned up with boiling water and buried.

14. Clothes and bedding used by sick persons must be either burned or boiled. Do not wash any clothes near wells or springs, nor permit surface water to run into any well or spring.

15. Municipal presidents and municipal councilors should enact these rules as ordinances, and see that they are enforced.

16. All school children are requested to inform their parents of these rules, which, if observed, will prevent great loss of life.

The Bureau of Education sent these circulars to every school teacher in the islands, with instructions that the rules should be taught to all pupils so that they could recite them, and then the pupils were requested to repeat them to their parents. The Archbishop of the Catholic Church of the Philippine Islands sent the circulars to every priest, with instructions that they should explain their contents to their parishioners. The Aglipay Church and other denominations did the same. Very large flaring red cardboard posters, with the rules printed in several languages, were posted in the postoffice, municipal buildings, and other public places throughout the islands. Later, a more advanced cholera circular was prepared for the use of teachers. The information contained in these later circulars enabled many teachers to cope successfully with the disease when it made its appearance in the small towns at which they were at work.

Many thousands of Filipinos soon learned that they could easily avoid contracting the disease. How different was this picture from that presented in 1902, when only fatalistic indifference was shown, and the only measures taken by the natives themselves consisted in nightly religious processions. With the exception of a few instances, in districts in which dense ignorance prevails, these latter are scarcely ever encountered. The number of persons who boiled their drinking water was astonishing.

CONCLUSIONS.

1. From the evidence obtainable at this time, it is impossible to state whether the cholera was reintroduced into the Philippines, or remained here in some latent form for the year and a half during which no cases were detected.

2. While there is no evidence to show that the disease spreads by other means than that of enteric fever, yet the rapidity with which it makes its appearance in many widely separated places, puts it in an entirely different class, so far as combating it successfully is concerned.

3. Maritime quarantine can practically insure the prevention of its spread by sea.

4. It is practically impossible to make a land quarantine effective, hence, it is useless to engender the opposition with which it is usually met, and the time and money required by such a quarantine, will yield much better results when put to the education of the public in the manner in which the disease spreads.

5. The education of the public is a much more effective measure in its suppression than methods requiring force in their application.

6. In order, finally, to make serious outbreaks of cholera in the Philippines impossible it will be necessary to replace the present insanitary water supplies with artesian wells, or others sources from which infection by surface drainage can be avoided, or to correct it by filters or other means where it does occur.

Strychnin in Shock.—Dr. Graeme H. Hammond, New York, states that whatever the effect of strychnin in surgical shock, it is absolutely injurious in psychic shock.

CEREBRAL SYPHILIS IN CHILDREN.*

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In part, this paper is based on the study of somewhat over 100 cases of undoubted syphilitic cerebral disease in children from the literature. A large number of other cases, undoubtedly of similar character, have been excluded merely because unequivocal evidence of syphilitic infection was wanting, or postmortem examination had not been made.

The paper is really a consideration of hereditary cerebral syphilis, but it is thought best to employ the broader title in deference to the opinion of certain well-known observers who believe that many cases of syphilis developing late in childhood are instances of acquired and not of congenital infection.

A study of a large number of cases from the literature does not indicate that there is much ground for this belief. Certainly, the great majority of the cases are undoubted instances of inherited disease. There is no reason, however, why cerebral symptoms of presumptive specific character, appearing late in childhood, may not in fact be the so-called "tertiary" phenomena of a specific infection acquired in earlier years. So far as the symptoms and the clinical interest of the affection are concerned, it makes but little difference when the infection occurred. It is with the fact of the frequency of cerebral syphilis in childhood and with the interesting clinical and pathologic manifestations of the disease that we have to do rather than with the question of the manner of infection.

It is not possible to obtain an adequate conception of the relative frequency of this affection in the period of childhood, by judgment based on the space devoted to the subject in the text-books. It is a field of research as yet almost unexplored in special pediatric literature, but one which as time goes on will be recognized as of the greatest interest and of far-reaching importance.

That the subject is deserving of a special chapter in pediatrics is evinced by the large number of instances of the affection to be found in the literature, and by its unquestionable relation to other and very common affections in childhood, not usually regarded as of specific nature.

When we consider the frequency of these other conditions in childhood, and the probable specific character of many of them the entire subject assumes a position of the foremost importance in the study of disease in children, and may justify a brief study of the subject and the placing on record of a grouped and condensed summary of some of the cases.

The words of Fournier,[1] in his treatise, page 422, may well be repeated as preface to any consideration of the subject:

> Avec les affections du système nerveux nous allons aborder un chapitre des plus importants de notre programme, et je puis ajouter des moins connus.

In the consideration of this affection we must study first the clinical phenomena in each case; second, the probable character of the morbid changes in the central nervous structure, responsible for these phenomena.

There are three pathologic conditions in the brain, which, singly or in combination, may be responsible for

* Read in the Section on Diseases of Children of the American Medical Association at the Fifty-seventh Annual Session, June, 1906.

1. Fournier: Syphilis Héréditaire Tardive, 1886.

the symptoms of cerebral syphilis. They are, in the order of apparent frequency of occurrence: Meningitis (usually leptomeningitis); arteritis (usually endarteritis); syphilomata (usually of meningeal origin). To these conditions all other changes are probably secondary.

What are the grounds on which, in any given case with nervous manifestations, we base our assumption that those phenomena are of specific origin? In themselves alone the symptoms, considered individually, and only from the standpoint of the phenomenon at any one time, do not present any characteristics that can be regarded as specific, for similar symptoms may be produced by diverse etiologic causes. It is only when we consider the phenomena collectively, the character of their onset and progress, and their relation with one another, that any special peculiarity is apparent.

When produced by syphilitic lesions of the central nervous structure, these phenomena present the following characteristics: First. They are multiform, having often no apparent relation to one another, associated together in an apparently random manner, often rendering their explanation, on the basis of any single lesion, impossible. Second. The onset of the phenomena is as a rule subacute, with the occasional occurrence of individual symptoms of very acute character and severe degree. Third. These latter phenomena are characterized by their tendency to disappear in the most unexpected manner, after a very brief duration, and by their equally striking and practically certain recurrence in the same or in some other locality; with the eventual persistence, after several such recurrences, of peripheral evidence of a destructive and permanent central lesion. Fourth. The striking rapidity with which some of the symptoms yield to specific treatment, and the equally remarkable manner in which other phenomena persist or pursue their course without the slightest regard to energetic therapeutic measures, or even make their appearance while such treatment is in force.

The phenomena are manifold, varying from time to time in character and degree, but at some one time during the course of the affection some one class of symptoms render themselves conspicuous by special predominance, occupying the foreground of a clinical picture whose background is the multiform symptom-complex to which reference has been made. Thus, motor phenomena may dominate the scene: epileptiform convulsions, general or unilateral; monospasms may occur; tremors; involuntary irregular movements without loss of consciousness; motor aphasias; paralytic conditions of any degree of severity or extent.

The ocular palsies, so frequent and conspicuous, belong to the instances in which the involvement of the cranial nerves is a prominent feature of the case.

Sensory phenomena; neuralgic pain, numbness, anesthesia and various parasthesic phenomena may prevail for a considerable time, especially in the early stages of the disease, while the background of other symptoms is still indefinite and vague. In other cases the psychical features, changes in character, irritability, apathy, depression, impairment of memory, diminution of mental capacity, dementia, and very rarely mania, may either usher in or close the scene, or remain throughout the essentially predominant manifestation of the central process.

It is by careful consideration of the nature of the onset, progress and duration of the predominant phenomena that we are enabled to draw some inference as to the probable pathologic type with which we have to deal in any given case. The subacute and often vague character of some of the early manifestations has led to their classification as prodromal or premonitory symptoms. Such a distinction is artificial, although in some respects convenient. These phenomena are as much a part of the symptom-complex as the later manifestations, and are, in their degree of vagueness or distinctness, no accurate index of the severity or extent of the morbid process at the time when they appear. Moreover, the premonitory symptoms of one case may be later developments in another instance.

It is not so much the initial phenomena themselves as it is the manner of their onset, and especially their course, that gives them a premonitory character. These early symptoms are characterized often by the insidiousness of their onset; frequently by their transient character and erratic course. Thus, following change of character and weakening of intellectual power, so insidious and slight as to be often unnoticed by the parents, and only remembered in the light of subsequent events, the child suddenly loses its speech, which, however, may last but a few moments or continue for days, complete restoration of the function ensues, only to be followed later on by a sudden loss of consciousness, with or without convulsive movements of general or local character. This may disappear entirely or the child may be left with partial paralysis of some part of the body. In another case in which for many weeks the only complaint has been of dull, diffused headache, with occasional attacks of vertigo, there develops, either suddenly or more slowly, a hemiplegia; this may disappear in a few days in the most unexpected manner, leaving no trace of muscular weakness, but appears again later, this time perhaps in the other half of the body. Or a child may show an unnatural tendency to sleep with an occasional complaint of nocturnal headache continuing for weeks or months, when finally the sudden advent of epileptiform convulsions indicates the cerebral nature of the condition; or gradual diminution of visual power incites the parent to seek medical advice and choroiditis or optic atrophy is found. Or, in another such case, paralysis of the ocular muscles may suddenly appear. Thus the features of nearly any period of the affection may appear early in its course, but are then usually of fleeting nature and erratic course.

Headache is frequently a very early symptom in childhood, as in adult life, but differs somewhat from the adult type in that it is often not well defined, more diffused in character and does not appear to reach the intense severity of the cephalalgia of later life. Insomnia, so common and so obstinate in adult life, is far less common in childhood, except in cases in which it depends on the nocturnal exacerbations of the headache. It may indeed be said to be, in children, one of the rarest of the symptoms so prominent a feature of cerebral syphilis in adults.

Of all the early symptoms of the affection in childhood, changes in disposition and in the intellect are perhaps the most common initial manifestations. Such alteration in character or intellect does not, however, always appear in the history we obtain from the parents of the child, unless they are very observant or the alteration very marked.

Early in the course of the disease in childhood may appear headache, brief sensory phenomena, oculomotor disturbances and fleeting motor palsies, especially transient difficulties with speech and convulsive attacks. While these symptoms may occur without premonition, and in the majority of cases seem to do so, more careful scrutiny of the child's life would in many instances re-

veal earlier premonitory evidence in the shape of insidious alteration in the psychical nature of the child. This change in the mental state of the child may be so slight as to consist merely in a retardation of the normal mental advance, or it may be so pronounced as to include an infinite variety of psychical phenomena; unusual irritability, causeless fits of grief or anger, moods of depression or excitement, bizarre ideas and hallucinations, apathy, loss of desire to play or to associate with its former companions, diminished interest in previously enjoyed occupations, impairment of memory, diminished mental capacity and ability to reason.

It is possible for a majority of these phenomena to make their appearance before the advent of motor or sensory disturbances. Usually, however, before this background of mental disintegration is fully unrolled, individual symptoms of more definite character appear in the foreground. There is another class of initial phenomena that may co-exist with, or may occur in place of the psychical symptoms. These phenomena are considered by Fournier[1] (page 471) as of the congestive order, but, as it seems to me, may more accurately be termed "circulatory disorders." The most common of these disturbances in children is vertigo. Of frequent occurrence also are brief interference with the function of speech, fleeting disturbances of vision and sudden attacks of syncope. Somewhat less frequent, perhaps because more difficult to detect in childhood, are brief periods of mental confusion or sudden lapses of memory. Tinnitus aurium may also be present.

Sooner or later after the appearance of the initial phenomena appear symptoms of a more positive type, inequality and fixation of the pupils, facial palsy, hemiplegic attacks or epileptiform convulsions. These symptoms, especially the epileptiform and the hemiplegic attacks, may be, in the little child, previous to the third or fourth year, the first apparent indication of the cerebral disease.

The earliest possible recognition of the true nature of the initial symptoms of this affection is imperative, for on the early diagnosis and the immediate institution of specific treatment depends the welfare of the child. If we can not obtain from the parents information of specific infection in themselves or symptoms of infection in the early history of their child, we must endeavor to find on the body of the child itself some evidence of previous disease, or, failing in this, seek for such evidence in the other children of the family, in the shape of recent or old traces of syphilitic lesions. If these are not found, careful scrutiny of the family history may by its revelation of numerous unexplained miscarriages and stillbirths, or the existence of excessive infant mortality, from convulsions or marasmus, give strong presumptive evidence of the probable specific nature of the case. In every such case the therapeutic test should be applied for the benefit that may result is incalculable and the harm nil.

In not a few instances nothing in the history or examination of the patient or the family will be found to enlighten us in our doubt, but suddenly an interstitial keratitis appears on the scene and yields the clue for which we have vainly sought. Or keratitis may occur in one of the brothers or sisters, or a chance ophthalmoscopic examination may reveal in one of them, or in the patient, evidence of choroiditis, reminding us that in searching for specific stigmata in the shape of deformities of the teeth and nose, scars about the mouth or in the throat, impairment of hearing, etc., the fundus as well as the cornea of the eye should be invariably examined, in the other children as well as in the patient.

The prognosis depends, first, on the early recognition of the nature of the affection; second, on the probable pathologic type, as far as can be determined by the clinical signs; third, on the period in the life of the child at which the process begins.

Determination of the type of morbid change in a given case is not always easy or possible, but certain inferences may be drawn from the clinical symptoms. Those instances in which occur intense headache, cranial nerve palsies, excessive reaction to sensory impressions, especially hearing and sight, dulness or torpor, insomnia or an unnatural tendency to sleep, and convulsive attacks and psychical disorders, especially when accompanied by a choroiditis, are indicative of a meningitis. When the cranial nerve palsies are an early or a predominant feature, a meningitis commencing or concentrated at the base is probable. Convulsive attacks and psychical irritability or depression, dulness or insomnia suggest the cortex as the seat of the greater meningeal involvement.

Those cases in which vertiginous attacks, sudden losses of consciousness or brief mental confusion, transient disturbances of speech and paralytic affections of short duration or eccentric type prevail, are instances in which arterial change is probably the predominant morbid process.

Certain features are common, however, to both the meningeal and the arterial form, and this is especially true of the mental symptoms, changes in disposition, irritability or apathy, progressive deterioration of mental power, paralytic conditions and convulsive attacks. They may result, in the former case, from secondary changes in the gray matter induced by a chronic meningitis or from a specific meningo-encephalitis, with subsequent atrophy of the hemispheres or cyst formation; or they may be produced by atrophy, sclerosis or softening in the gray and white matter, secondary to arterial disease, with its occlusion of the arteries and consequent impairment of nutrition. In many cases the two conditions are combined, and it is not then possible always to determine which morbid process is responsible for those individual phenomena which may be produced by either.

Tumor formation, in the strict sense of the word, usually gives rise to focal symptoms depending for their nature on the situation of the growth. The gummatous growth of specific cerebral disease, however, is more commonly a diffuse gummatous infiltration of the meninges, its symptoms being consequently those of meningitis, and especially meningitis at the base, with resultant cranial nerve disturbance.

The prognosis depends to a considerable extent on the pathologic type. Purely gummatous lesions yield readily to specific treatment. Meningeal processes, if not of too long duration, and taken at a time previous to the occurrence of secondary atrophy and sclerosis in the gray matter, also possess a favorable prognosis. If destructive involvement of the hemispheres has already occurred, specific treatment may check the advance of the meningo-encephalitic process, but the destroyed areas remain, with atrophy, sclerosis and softening and adhesions between the meninges and brain.

Of all the forms of syphilitic cerebral disease the arterial lesions present the most unfavorable prognosis. While some cases respond to treatment, others not only do not yield, but, even while treatment is in force, may present an increase in clinical phenomena due to ar-

terial disturbance. Hemorrhage is very rare in children with specific cerebral arterial disease. Occlusion from thickening of wall or thrombosis is the rule.

Finally the prognosis depends greatly on the time when the cerebral disease commences. If it begins at a period of childhood when reasonably reliable subjective complaint is possible, or when the mental evolution has reached a degree at which early changes in disposition and insidious weakening of the intellect are likely to be conspicuous, earlier recognition, and therefore more effective treatment, will result.

Syphilitic lesions in the brain have been found immediately after birth, or so soon afterward that they furnish conclusive evidence that it is possible for the involvement of the cerebral nervous structure to antedate birth.

CASE REPORTS.

CASE 1.—Still-born syphilitic child.[2]

Extreme pachymeningitis and leptomeningitis of base of brain and upper posterior portion of cord, with adhesions between the membranes and extreme fibrous tissue proliferation in the pia, invading and involving the white and gray matter of the cord. Syphilitic arteritis of the basilar and both vertebral arteries. Gummatous infiltration in bones, liver and intestines.

CASE 2.—Death ½ hour after birth. Mother syphilitic.[3]

Inflammation and adhesions of the meninges and increased fluid in lateral ventricles. Gummata in both lungs. Adhesions of dura to skull with necrosis of inner table.

CASE 3.—Death 20 hours after birth. Mother syphilitic.[3]

Inflammation and adhesions of the meninges with fibrinous exudate along the vessels. Adhesions of dura to bone with necrosis of inner table.

CASE 4.—Death 5 days after birth. Child syphilitic.[2]

Multiple foci of softening throughout the cortex. Proliferation of neuroglia. Diffuse gummatous leptomeningitis. In the cord, diffuse pachymeningitis and leptomeningitis with adhesions, and of fibrous character, of lighter grade and without involvement of the cord itself. Gummata in the suprarenal glands. Specific osteochondritis of the femur, tibia and vertebræ. Diffuse bronchopneumonia and follicular enteritis.

CASE 5.—Death 10 days after birth. Child syphilitic.[4]

Meninges normal. Extreme thickening of the basal arteries with great reduction of the lumen. Endarteritis obliterans. Syphilitic pemphigus, hepatitis, and amyloid spleen.

CASE 6.—Death 6 weeks after birth. Child syphilitic.[5]

Diminution in size and number, deformity of contour and changes in protoplasm (degeneration and atrophy) of ganglion cells of gray matter of the cord, with proliferation of the neuroglia. Central canal filled with transparent mass, about which small round cells are massed 5 to 6 rows deep.

CASE 7.—Death 6 weeks after birth. Child syphilitic.[5]

Atrophy of cells in gray matter of the posterior and lateral portions of anterior horns and in the column of Clarke. Circumscribed homogeneous foci in the entire extent of dorsal region and about the vessels of the anterior commissure.

CASE 8.—Boy 23 weeks old. Illegitimate.[6]

Coryza and specific eruption at birth. Fourteen weeks later head began to enlarge, reaching extreme size. Seventeenth week, convulsions of brief duration, involving mainly the eyes. Twenty-third week, death. Pachymeningitis hemorrhagica.

CASE 9.—Death 5 months after birth. Child syphilitic.[7]

Beginning affection of vessels of cord.

These cases and those immediately following show how very early the central nervous system may become the seat of syphilitic disease. In such early instances it may be impossible to detect the brain involvement unless the process is clinically indicated by gross symptoms such as repeated convulsions or pronounced paralysis.

CASE 10.—Girl, 10 months. Father syphilitic.[8]

At age of 1 month snuffles, no rash. Up to age of 4 months eleven convulsions of epileptiform character, then extreme emaciation and ulcers on nates, both conditions yielding to mercuric inunctions. Seventh month disseminated choroiditis was discovered. Tenth month death from marasmus, without other nervous symptoms.

Postmortem.—Scattered adhesions between the dura and the pia-arachnoid. Sylvian fissures glued together by old exudate. At the base near the optic commissure a patch of greenish lymph. In many places on the vertex and under surface of temporosphenoidal lobes the pia is thick and fibrous. On upper surface of left parietal lobe a small patch of calcification. Pia especially cloudy and thickened along the course of the vessels, and growths of connective tissue septa extended from the pia into the brain. Vessels of the circle of Willis normal, but the arteries of the pia showed microscopically a high degree of arteritis, involving chiefly the inner and middle coats, and in places leading to complete occlusion. Few areas of superficial softening in the cortex.

This case illustrates remarkably the considerable degree to which the cerebral or, more properly, the meningeal process may attain in the early months of life, with comparatively slight clinical evidence of the same. It is well termed a case of "chronic smouldering disease."

CASE 11.—Boy, 15 months. Child syphilitic.[8]

Coryza from birth. No history of rash. Two or three weeks after birth had sore nates lasting eight months. Extreme emaciation. Double coarse inconstant nystagmus, with tendency to deviation of axes to left. Pupils equal and of moderate size. Fundus negative. Double facial paresis, involving also upper branches more marked on left, and chiefly evident on movement. F. reaction diminished on both sides, especially the left. G. reaction increased on both sides, especially the left. Frequent fine tremors of facial muscles about the corner of the mouth and of the orbicularis palpebrarum on the right side and to a less extent on the left side as well. Death from exhaustion at 15 months.

Postmortem.—Some opacity of the pia at the base. Both third cranial nerves at superficial origin swollen to conical tumors, and also swelling of the fourth, fifth, sixth, seventh and eighth pairs as well. Microscopic examination showed almost complete atrophy of axis cylinders, abundant infiltration of new cells with fine stroma. The new growth was especially abundant in the funiculi, but also in the interfunicular areolar tissue. The basilar and all the arteries of the circle of Willis were extensively diseased, appearing white, opaque and semi-cartilaginous. Thickening continuous along entire course but no nodules and no calcification. On section the lumen was greatly narrowed, in places eccentric in outline, in many places nearly completely obliterated. Microscopic examination of the middle cerebral artery showed the typical changes described by Heubner. Invasion of all the coats by a cellular growth, with concentration of the process in the intima, although in places the muscular layer itself was destroyed.

This case is unique and remarkable on account of the very unusual gummatous infiltration of the cranial nerves, of perfectly symmetrical character, the extreme affection of the arteries, with the practical absence of meningitis. It is a very rare condition in childhood. This child during life had "odd" attacks of laryngeal spasm and gasping, becoming "blue in the face," which

2. Jürgens: "Ueber Syphilis des Rückenmarkes und seiner Häute," Charité Annalen, 1883, p. 729.

3. Howitz: Reference in Behrend's Syphilodologie, ii, p. 60.

4. Marchiafava: "Sulla sifilide delle cerebrali; studi clinici ed istologici;" Atti dell' accademia med. di Roma, 1877, iii, No. 2, p. 101.

5. Jarisch: "Ueber den Rückenmarksbefund in 7 Fällen von Syphilis," Arch für Dermat. u. Syph., 1881, p. 621.

6. Heubner: "Pachymeningitis hemorrhagica bei hereditärer Syphilis," Virchow's Archiv, 1881, lxxxiv, p. 267.

7. Kahler and Pick: "Befunde im Rückenmarke eines syphilitischen Kindes," Prager Vierteljahrschr., 1879, ii, p. 1.

8. Barlow: "Meningitis, Arteritis and Choroiditis in a Child the Subject of Congenital Syphilis," Trans. Path. Soc., London, 1877, xxviii, p. 287; also Medical Examiner, 1877, p. 68, and "Gummata on Cranial Nerves; Disease of Cerebral Arteries in a Case of Congenital Syphilis," Trans. Path Soc., loc cit., p. 291.

Barlow thought might be due to some affection of the vagus. I think it was probably tetany, which at this time (1877) was not generally recognized. The child had had much gastrointestinal trouble, vomiting, etc.

CASE 12.—Child born with specific eruption.[9] Age not stated. Mother syphilitic. Eruption cleared by inunctions. Later, periosteal gumma of jaw; some weeks later, death with apparent meningeal symptoms, in coma.

Postmortem.—Specific arteritis of vessels of circle of Willis. Foci of softening in the cerebrum and cerebellum.[9]

CASE 13.—Boy, 2 years.[2]

Abnormal over-development of skull with mental changes, curious alternation between brightness and dulness, talking often constantly to himself. Death from diphtheria and bronchopneumonia at 2 years.

Postmortem.—Gummatous pachymeningitis and leptomeningitis with adhesions. Numerous gummata in cortex of considerable size and a very small one in cord. Chronic internal hydrocephalus. Syphilitic periostitis of tibia and phalanges. Gumma in left kidney. Fibrous adhesive perihepatitis and perisplenitis.

This case shows the relatively rare condition in children of circumscribed multiple gummata of the brain. They were in the cortex, however, and therefore undoubtedly of meningeal origin.

As we come to the consideration of the affection in childhood proper, that is over 2 years of age, the clinical phenomena become more prominent and the cases assume greater clinical interest. Frequent in its occurrence in children is the involvement of the cranial nerves, and this occurs as the sole manifestation of the cerebral lesion, or as the predominant feature, or only as an incidental precursor or accompaniment of other phenomena. It will be noticed in many of the cases that follow, but in the series immediately following it will be seen to exist as the most striking or the sole feature of the affection.

CASE 14.—Child, 2 years.[10]

Specific papular eruption over entire body. Loss of sight in right eye, specific iritis. On the left ptosis, divergent strabismus, dilated fixed pupil. Specific treatment caused disappearance of rash but no change in the cranial nerve condition. Death from marasmus.

Postmortem.—Right optic atrophy. Left oculomotor atrophy with gummatous infiltration. Focus of softening in the left lenticular nucleus, and in the right cerebral hemisphere.

CASE 15.—Girl, 15 months. Parents both syphilitic.[11]

Following specific eruption shortly after birth, paralysis of motor oculi and right facial occurred at tenth month; ptosis on right and dilatation of left pupil; with hemiplegic symptoms when 14 months old, and death at 15 months, following 12 days of epileptiform convulsions.

Postmortem.—Leptomeningitis. Diffuse thickening of basal arteries, the basilar and vertebrals nearly obliterated and thrombosis of the closed vessels above. In the cerebral arteries were extreme changes, destruction of the media, thickening and small cell infiltration of the adventitia and thickening of the intima. Minute foci of softening were in the gray and white matter of the cerebrum. Right facial nerve showed small cell infiltration of the neurilemma. Ventricles were normal. Numerous macular-like foci of granulation tissue were in the meninges with hyperemic vessels. Carotids were thickened.

CASE 16.—Girl, 9 years. Child syphilitic.[12]

Sudden onset of signs of cerebral pressure. Later transient squint, three attacks of unconsciousness, diplopia, nearly complete blindness and deafness. Eight months after onset there was no wink reflex and beginning optic atrophy. Pupils dilated, equal, with hardly any reaction to light. Deaf on right except to very loud sounds and complete absence of hearing on the left. Taste for sweet gone. Alternating rapid and slow pulse.

In further course there were nocturnal exacerbation of headache, weakness of lower extremities, and three months later extremely painful stiffness of the neck for 14 days, and for 3 months monospasms, hemispasms, and general epileptiform convulsions occurred. During latter part of their course the knee jerks were affected, being absent on right, weakened on left. Then ensued attacks of intense pain, especially in the legs, then spastic signs, first as attacks of perfectly symmetrical paraspasm, finally permanent contractions. Legs more affected than the arms. Vagus paralysis, bronchopneumonia and death at 9 years.

Postmortem.—Non-ossified bulging cranial sutures, internal hydrocephalus, some ependymitis, closure of fourth ventricle by tumor of inferior vermiform process of cerebellum, of meningeal origin, and adherent to floor of fourth ventricle, circumscribed destruction in region of calamus scriptorius and the ala cinerea. Chronic meningitis at the base involving the cranial nerves and chronic diffuse meningo-encephalitis over cerebellum. Extreme chronic meningo-myelitis in the cord, with vascular changes. Arteries of base unchanged.

This case is remarkable in that the intelligence was unimpaired to the end. It was a basal, cerebellar and spinal process essentially.

CASE 17.—Child, 12 years. Father syphilitic.[13]

Violent pain in left temple and eyeball, with protrusion. External squint, ptosis, diplopia. Complete disappearance with specific treatment in two months.

CASE 18.—Boy, 2¼ years.[14]

Syphilitic skin and pharyngeal lesions cleared with mercury. Two months later sudden attack of aphasia, paralysis right lower facial branches and right arm. Under potassium iodid all symptoms disappeared in 14 days.

CASE 19.—Girl, 12 years. Parents syphilitic.[15]

Skin lesions in early life. Periodical headaches for years. Suddenly following 12 days after fever and vomiting, tenderness of cervical muscles, and intense frontal headache; right ptosis, paralysis of palate and paresis of right arm appeared with intense vertigo, while in upright sitting position, and double nystagmus. Pupils negative. Two or three days later abducens paralysis and diminished sensibility on right thigh, pains in right arm and leg. Complete left facial paralysis and anesthesia in territory of left fifth, with trophic disturbance on skin. Intercurrent keratitis and iritis. Specific treatment produced marked but not complete improvement in 6 months.

CASE 20.—Girl, 6 years.[16]

Diffuse maculopapular eruption over body. Chill, fever, delirium, coma, retraction of head, Kernig's sign, temperature, 104.8; pulse, 140; leucocytes, 25,000; cerebrospinal fluid sterile. Extension of eruption to face and extremities. Some clearing of sensorium with irritability and headache. Six days after onset left facial paresis of all branches. Interstitial keratitis. Fundi normal. Specific treatment caused improvement of all symptoms, except slight remaining facial paresis and internal ophthalmoplegia of left eye.

CASE 21.—Girl, 8 years. Parents syphilitic.[17]

When five weeks old lost power in right arm for five weeks. Eighth week papular eruption on back, buttocks and around genitals and arms. Cried much at night and buried head in pillow during infancy. Third year double keratitis. Fifth

9. Declerq and Masson: "Contribution a l'Etude de la Syphilis cérébrale chez l'Enfant," Annal. de dermat. et de syph., 1885, p. 708.
10. Engelstedt: "Die Constitutionelle Syphilis," German. By Eberhart. Würzburg, 1861, p. 148.
11. Chiari: "Hochgradige Endarteritis luética (Heubner) an den Hirnarterien eines 15 monatlichen Mädchens bei sicher konstartirter Lues hereditaria," Wien. med. Wochschr., 1881, pp. 475 and 507.
12. Böttiger: "Beitr. zur Lehre von den luetischen Rückenmarks Krankheiten," Arch. für Psychiatrie, 1894, p. 649.
13. Galezowski: "Contributions a l'Etude des Tumeurs syphilitiques de l'Orbite," Recueil d'Ophthalmologie, 1879, T. I., p. 454.
14. Szontagh, F. von: "Diseases of the Central Nervous System in Congenital Syphilis," Orvosti Hetilap, Budapest, 1888, p. 1425; also Trans. Pester med. chir. Presse, 1888, xxiv, p. 1093.
15. Thiersch: "Zur Casuistik der Hirnsyphilis," Münch. med Wochschr., 1887, p. 445.
16. Butler, William J.: "Cerebral Hereditary Syphilis," Am. Med., x, pp. 989 to 992.
17. Mackenzie: "Contribution to the Study of Congenital Syphilis," New York Med. Jour., 1884, xxxix, p. 605.

year double ptosis with intense occipital headache, all disappearing in a month on unknown treatment. Then right internal squint and deafness in right ear with slight discharge, followed by a specific inflammation of the throat of great severity.

CASE 22.—Girl, 5 years. Child syphilitic.[18]

Was treated soon after birth when signs appeared. Fifth year sudden complete oculomotor paralysis. For several months had had headache and vomiting. Considerable improvement under specific treatment.

CASE 23.—Girl, 14 years. Father syphilitic seven years before her birth.[19]

Well marked congenital syphilis. Paralysis of right third and sixth and anesthesia in the distribution of the ophthalmic and superior maxillary division of the fifth. Corneal opacity and old iritis on the right.

Hutchinson remarked, at the time this case was shown, that it was "a very unusual case." In view of the other cases here mentioned, it can not be so considered at the present time.

One of the most frequent manifestations of specific cerebral disease, in the earlier years of childhood, is the occurrence of convulsive attacks. They may usher in, accompany, or follow other phenomena; they may give place to these phenomena eventually, or they may remain throughout the predominant or the sole manifestation of the central lesion.

In Case 10 convulsions are the first and only clinical evidence of what proved to be marked cerebral involvement. In Case 15 they close the scene of brief but well-marked clinical signs. They may be of any form and every degree of severity and extent. They may or may not be characterized by loss of consciousness. They are frequently of such a character that no clinical differentiation from epilepsy, either petit mal or grand mal or the Jacksonian type is possible. So typical are many of these cases that no other classification is justified and one is forced to the conclusion that they differ from any other order of epilepsy, only in their etiology and in their manner of response to therapeutic agents. Cases of epilepsy of specific origin may commence in early infancy as the result of damage done to the brain from an earlier, sometimes perhaps intrauterine, specific lesion, or they may begin at any other period, even late in childhood, from the same cause. In these cases the epilepsy may not be accompanied by any other evidence of the central damage, or it may be associated with idiocy or feebleness of mind, or with impairment of motor power of greater or less extent; all of these conditions being the secondary result of damage done to the brain, and analogous to similar conditions brought about by other etiologic factors, such as the epilepsy, enfeeblement of mind, or palsy, secondary to lesions of the brain produced by trauma, at birth or otherwise, meningitis, or by the toxic injury or encephalitic processes brought about by infectious diseases, other than syphilis; or to lesions induced by arterial conditions, other than specific. Since pathologic examination of many cases in which the syphilitic factor is known shows lesions similar to those of which the etiology is obscure, it is not unreasonable to assume that some of the latter may have been originally of specific origin. These secondary conditions from old lesions may be of constant or fixed type, but the convulsive attacks, palsies, and mental phenomena that are the direct primary result of active, progressive syphilitic disease are not fixed or constant, but are characterized by their variability of form and duration, enduring for a time, then giving place to other phenomena, eventually perhaps returning to assume permanent form.

CASE 24.—Boy, 9 years.[20]

For six months in infancy had convulsions, then they ceased but returned in his seventh year without evident cause and continued several times each day with occasional day or two of freedom until his ninth year, with no relief from bromids. Then it was discovered that his mother had a specific ulcer on her foot and the father was found to be badly affected, nodes on tibia, severe nocturnal headache and ptosis on the left. Potassium iodid gave the child quick relief and four months later there had been no return of the epileptiform seizures.

CASE 25.—Boy, 14 years.[21]

When three months old had general eruption over body for which he was treated nine months. In his fourth year had a convulsion lasting six hours, followed by right hemiplegia and loss of speech. Six months later another convulsion, becoming of weekly occurrence and only on right side, until recently, near his fourteenth year, when they changed to the other side. In his eleventh year double keratitis appeared. Upper central incisors typically specific. Mind enfeebled.

CASE 26.—Girl, 12 years.[21]

Father died of cerebral syphilis. Eight weeks before first seen, the child was suddenly taken with convulsions which recurred uninfluenced by treatment. Teeth called typical by Hutchinson. Corneæ cloudy, bridge of nose sunken.

CASE 27.—Boy, 12 years. Father syphilitic.[22]

Convulsive attacks repeated at irregular intervals, never exceeding two months for 10 years without other symptoms. Then tibial and clavicular exostoses appeared. Specific treatment cleared both the bone lesions and the convulsive attacks.

CASE 28.—Boy, 15 years.[23]

Number of family died in early life. He had suppurative destructive lesion of nose following accident in early life. For some time had had epileptic attacks in right half of body. Died during one.

Postmortem.—Chronic gummatous meningitis of the left half of the dura. Sclerosis and atrophy of left cortex with softening in subjacent white matter.

CASE 29.—Girl, 2 years.[24]

Mother infected at time of conception of second child, which pregnancy resulted in a still-birth. Third child, boy, divergent strabismus, coryza, conjunctivitis, convulsion, macular rash on hands and feet and osteochondritis of epiphyses all within the first six weeks of life. Late development mental and physical. Fourth child, the patient. In fourth month, sudden, rigid, painful contracture of right leg, lasting two or three minutes, increasing to from three to ten a day, without loss of consciousness and without resulting palsy. Rapid mental and physical development. Anemia and splenic enlargement. Specific treatment without result.

CASE 30.—Boy, 8 years. Parents syphilitic.[25]

Specific eruption in early life. In eighth year onset of epileptiform convulsions, stopped by specific treatment. Death later from typhoid.

Postmortem.—Thickened dura and slight atrophy of cerebral substance in region of paracentral lobule.

(To be continued.)

18. Zappert: "Left Oculomotor Paralysis the Result of Hereditary Syphilis," Neurol. Centrbl., 1895, p. 41.
19. Nettleship: "Paralysis of the Cranial Nerves in Congenital Syphilis," Brit. Med. Jour., 1880, ii, p. 707.
20. Althaus: "Case of Infantile Syphilitic Epilepsy," Med. Times and Gaz., 1874, p. 398.
21. Jackson: "Cases of Disease of the Nervous System in Patients the Subjects of Congenital Syphilis," St. Andrews Med. Trans., 1868, i, p. 146.
22. Ripoll: Accidents tardifs de la syphilis héréditaire," Rev. méd. de Toulouse, 1880.
23. Hayd: "Zur Casuistik der Gehirnsyphilis," Inaugural-dissertation München, 1886.
24. Fischl: "Corticale (Jackson'sche) Epilepsie, congenitale-syph. Ursprungs," Zeitschr. f. Hlk., 1890, p. 279.
25. Pellizzari: "Della Syphilide Epilettiforme," Lo Sperimentale, 1879, p. 5.

THE RIPENING OPERATION FOR IMMATURE SENILE CATARACT; ITS PLACE.*

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The earlier belief that a patient must await the time of complete maturity of a cataract before extraction could be performed with safety, led to the development of various artificial methods to hasten ripening. But this meant the performance of a preliminary operation, and Schweigger, in 1890, advocated the removal of immature cataracts after the age of 50, claiming that sufficient hardening of the lens has taken place at this age to enable the operator to remove the entire cortex. Many operators have followed and advocated this practice and the number seems to be constantly on the increase.

Yet it is a fact that ripening operations are still practiced by some surgeons with success, in all cases in which conditions make it humane not to wait for nature to bring about maturity, in preference to extracting an unripe cataract, while many other operators often perform the ripening operation under like conditions. Thus there seems to be a great difference of opinion regarding this very important question.

The ultimate question to be determined is, whether in those cases in which, for reasons to be mentioned later, we think it unwise to wait for maturity, we shall always extract an immature cataract, always perform a preliminary ripening operation, or whether there are not cases in which it seems best to do a ripening operation, and other cases in which the extraction of an immature cataract seems the wiser course. It is for this purpose that I present this subject at this meeting, and ask for the experience of the members of the section.

In years past this section has discussed the ripening operation,[1] and last year it expressed the almost unanimous opinion, in answer to Dr. Bulson's[2] inquiries, that it believed the practice wise, in selected cases, either to remove an unripe cataract or to perform trituration and then to extract. In order to secure the most recent expression from operators of experience, I have addressed letters to many prominent ophthalmologists of the United States, from whom sixty-nine replies have been received. These replies form a supplement to my paper, and for the detailed statement of the questions asked, with their replies, the reader is referred to this portion of the paper.

As evidence that trituration has not yet been discarded by many operators, the fact should be noted in these replies that twenty-six surgeons still practice the operation when occasion demands, that four rarely practice it, but nineteen who have had some experience now do not practice it at all, preferring the extraction of immature cataract, usually with irrigation. Of those who continue to practice trituration with satisfactory results, note the opinion of Colburn, who has operated on forty-seven patients; of Ayres,[3] Wescott, White, Prince and others, who frequently practice intraocular massage with preliminary iridectomy, and have satisfactory results; of Ball, who has had much experience and similar results; of Wilder, who practices Forster's method in "certain cases" in which he performs preliminary iridectomy, but otherwise prefers to extract an immature cataract. The following significant paragraph is by de Schweinitz:[4]

> The safest plan is to wait for maturity; but if this is impossible or very undesirable, the author has been in the habit of extracting an unripe cataract in preference to performing a ripening operation. This formerly was also the practice of Knapp; but recently he has ripened immature cataracts in a certain number of cases by the method of internal trituration, as employed by Boerne Bettman[5] and others, and has been satisfied with his results.

That Knapp approves of artificial ripening under certain conditions is shown by his opinion expressed at the end of this paper.

On the other hand, however, note the statement of Risley, who tried a series of twenty-five cases, mostly by trituration directly on the capsule, and does not think his results were as good as after extraction of immature cataracts. He has entirely given up the operation, and does not think it is to be commended.

Many others, as Kipp, Callan, Lewis, Hubbell, Bull, Ellett, Griffin, Reynolds and Posey performed trituration formerly but never do so now. Others, as Taylor, M. Black, and Carrow, have not cared to practice the operation, having secured satisfactory results with premature extraction and irrigation.

There is only one point on which there is a general agreement, and that is, regarding the question of determining in what cases we shall not wait for maturity.

With one exception, all believe that, under the circumstances to be mentioned later, either an immature cataract should be extracted or a preliminary ripening operation performed; but Fox, in answer to Bulson's questions a year ago, states: "I do not extract immature senile cataracts, for I do not believe in taking the risk of serious secondary complications which nearly always take place, and render the ultimate results unfavorable;" and in reply to my question as to whether or not he ever performs the ripening operation, he states: "I do not," but modifies this statement, in answer to the question: "Under what circumstances would you perform the operation," by saying: "Only when the nucleus is translucent or sclerosed, and it becomes imperative to obtain better vision quickly." He further says: "It is always dangerous to operate on an unripe cataract. The early removal of an unripe cataract leads to a great deal of trouble."

The methods which have been devised for the purpose of ripening an immature cataract, are:

1. Puncture of the anterior capsule combined with iridectomy (Mooren, 1858).
2. Puncture of the capsule combined with trituration (Rhomer, 1886).
3. Preliminary iridectomy with trituration through the cornea, indirect trituration (Forster, 1881).
4. Trituration after simple paracentesis without iridectomy (T. R. Pooley[6] operated on rabbit, 1885, and soon after J. A. White operated by this method on a human being).
5. Paracentesis, with or without iridectomy, and direct trituration on the anterior capsule (Ricaldi, 1888, and Bettman, 1892).

From investigation it appears that the last two methods are practiced to almost the same extent. Two operators, Dr. J. A. White and Dr. Edward Jackson, however,

* Read in the Section on Ophthalmology of the American Medical Association, at the Fifty-seventh Annual Session, June, 1906.

1. Weeks: "Treatment of Immature Cataract," THE JOURNAL A. M. A., p. 955, Sept. 30, 1905; also de Schweinitz: "Immature Cataract and Its Treatment," THE JOURNAL A. M. A., p. 1467, Dec. 8, 1900.

2. Bulson: "The Extraction of Uncomplicated Immature Senile Cataract," THE JOURNAL A. M. A., Sept. 23, 1905, p. 905.

3. Ayres: "Artificial Ripening of Cataract," Cincinnati Lancet-Clinic, Oct. 10, 1896.

4. "Diseases of the Eye," 1906.

5. Boerne Bettman: "Ripening of Immature Cataracts," Ann. of Ophth. and Oto., Jan., 1893.

6. Pooley: "A Modification of Förster's Method of Artificially Ripening Cataract." N. Y. Med. Jour., Dec. 26, 1885.

practice exclusively and with great success, the method of Pooley. Knapp considers needling the capsule or direct trituration the only efficient method.

Operators of experience disagree regarding the selection of the method of Forster or Bettman. Ayres, Wilder, Prince, Wescott, and others prefer the former. Wilder is strongly opposed to direct trituration, having had two serious results following this method, but Colburn, Ball, Weeks[4] and others prefer it to trituration outside of the cornea.

THE SAFETY OF TRITURATION OF THE LENS.

Considering the large number of operators who have performed this operation, the number of cases in which ill results have occurred have been very few. Only three are reported in which loss of life resulted, and two of these might be excluded, because one proved to be an unfavorable case (Wilder's), and the other was due to iris prolapse and infection (Colburn's). In one there was so much reaction that later it became necessary to remove the eye. This was Wilder's case, in which he did trituration directly on the capsule, "which, however, was found to have a choroiditis, together with posterior staphyloma, so that it would not have been a favorable case for any kind of intraocular operation." Baker's case was one of glaucoma, in which the eye subsequently had to be removed on account of pain.

There have been a number of cases of iritis, but no cases in which ultimate poor vision resulted, though Wadsworth feels that vision was not so good in some cases (Wadsworth, Callan, Reynolds, Hansell). Four cases of glaucoma were reported, one each by de Schweinitz[4] and Griffin, both ending well, likewise another by Donovan, in which it became necessary to remove the lens. Posey had a case in which he suspected retinal detachment, but if so, it was cured by rest in bed, and the ultimate results were good. With very few exceptions, operators who have had experience do not regard the operation as unsafe in uncomplicated cases.

THE EFFICIENCY OF THE OPERATION.

A study of the opinions expressed shows that the operation is most effective in ripening senile cataracts when a hard nucleus is present and it is in just such cases that the operation would be most needed, but that it is entirely ineffective in young people, and in cases of soft cataract. This is expressed by Dr. Edward Jackson,[7] who practiced Pooley's method. He says: "In the matter of efficiency, my experience indicates that indirect massage is efficient only in senile cataract, that is, only when the opaque lens contains a rather large, firm nucleus." Dr. J. A. White[8] has had some success with the same method in cases of cortical cataract, though he has had to resort to a repetition of the operation in two cases. He also states, however, that the operation is most successful when a hard nucleus is present, which, he says: "Acts as a base on which to crush the cortex." Several operators express some dissatisfaction, i. e., inability always to secure ripening, but do not stipulate the character of cases. Weeks says: "I have not found that the lens substance escapes more readily after the ripening operation than when the immature cataract is extracted," and Knapp, Lewis, Bull and Hubbell make similar complaint of failure in some cases. These, however, are exceptions, and there is not much complaint on this point.

7. Jackson: "Indirect Massage of the Lens for the Artificial Ripening of Cataract." N. Y. Med. Jour., Oct. 28, 1893.

8. White: "Remarks on Immature Cataract and the Best Method of Hastening Maturity," Ann. of Ophth., 1892, vol. xxi, No. 4.

TIME REQUIRED FOR RIPENING.

From one to four or five weeks are necessary, according to most of the opinions expressed, but extraction is not practiced usually for ten weeks.

It would seem that a second operation for membranous cataract is not required so often after extraction following a ripening operation, as after extraction of immature cataract, though many operators state that they do not think there is any difference in this respect.

OBJECTIONS TO THE OPERATION.

It does not appear that the objections to the operation by those who have had experience and do not commend it arise from ill results, as these have been comparatively rare, but rather because it is believed by many that an immature cataract can be removed as easily as an artificially ripened one, many believing that the trituration thickens the capsule and causes it to adhere to the lens substance.[9] One operator (Bulson[2]), who prefers the extraction of immature cataract, and presented a paper on this subject before this section a year ago, believes that this is the only place for the ripening operation, i. e., "unless patients having immature cataracts, should, from nervousness or other reasons, give the operator a feeling that but little manipulation at the time of extraction should be employed."

An immature cataract can sometimes be well removed after the age of 60, and even before that time if it is not very immature, but without irrigation before that age, and often after 60, considerable cortical matter is apt to remain, to cause much trouble later with iritis and membranous cataract. The enthusiasm with which those who practice irrigation in cases of extraction of immature cataract (with the apparatus of Lippencott, Carrow or Reik) leads one to believe that it is of great value under such circumstances. Carrow practices irrigation in all cases, ripe or unripe, and extracts "whenever the patient loses reading ability."

Some object to trituration on the ground that it means an extra operation, and this is valid where it is not required, in those cases in which an immature cataract can as well be extracted; but, on the other hand, some operators often perform preliminary iridectomy, which also is an extra operation. Thompson, of Indianapolis, advises preliminary iridectomy in all cases in which for any reason there is doubt regarding successful results. Weeks still practices trituration occasionally when he does a preliminary iridectomy, evidently believing it to be an aid, but not of enough value to warrant the extra operation unless preliminary iridectomy is to be performed.

CONTRAINDICATIONS AND INDICATIONS.

In no case of immature cataract would operative measures be resorted to when the patient had sufficient vision in the other eye. No definite degree of loss of vision can be defined in exact figures, for other things have to be taken into consideration in deciding the advisability of the removal of, or ripening of, an immature cataract. The slow and equal development in both eyes, of central cataracts; the loss of ability to earn a livelihood when dependent on the same, and especially when others, too, are dependent; the unhappiness which may result to the patient and those about him; and the general and local conditions have to be considered.

I have been in the habit of performing the Förster

9. Crumb: "A Unique Point in Removing the Soft Lens Matter from the Capsule of an Unripe or Over-ripe Lens." Amer. Jour. of Ophth., March, 1899.

operation in uncomplicated cases of immature senile cataract having much soft cortex (recognizing the fact that many lenses are hard, even though not opaque, particularly in patients over 60), and in those patients having two eyes with slowly maturing cataracts and poor vision, enough to interfere with earning ability or to cause the patient unhappiness. This has been done with satisfaction. In no case has a secondary operation been necessary, and in all cases good results have followed, but I am not prepared to say that equally good results might not have followed extraction with irrigation, though I am sure irrigation would have been necessary. As an example the following case is reported.

Patient.—A. T., male, aged 54, came under the observation of one of my patients, who elicited the following facts:

History.—The man had been a barber, supporting comfortably a family of six, up to two years previous, when his sight became so poor that he was obliged to seek other work. He took up the making and peddling of candy, and left his small home town to come to the city. He was not able to earn more than enough to support himself, and his wife was supporting the remainder of the family by taking in washing. He demurred at coming to see another oculist, as he had seen several, and had been told that he would have to wait for his cataracts to mature.

Examination.—Showed nuclear cataracts, just about the size of his pupils, equal in the two eyes, and vision 10/200, improved but little with a mydriatic.

Treatment.—The patient was advised to have a ripening operation, and the risks were explained. He consented gladly, and a preliminary iridectomy was performed on one eye, with careful trituration outside of the cornea. Three weeks later, the lens, being entirely opaque, was removed, a small amount of cortex remaining. Only slight reaction took place.

Result.—He left the hospital two weeks later and soon went home. In three months he returned and was fitted with glasses, giving 20/30 vision. I saw him some months later, and the other lens showed no further development of the opacity. He has returned to his trade, and is able to support his family.

The details of this case are recorded as it furnishes a good example of the circumstances which make it practically imperative that some such procedure should be practiced for humane reasons.

It is evident that the operation is not to be commended in cases complicated with high myopia, choroiditis, or other inflammatory conditions, nor in cases predisposed to glaucoma, nor where adhesion to the iris is present. Nor is it necessary where a cataract is nearly mature, nor in cases of patients over 60, when the cortex is apt to be of such consistency that it may be removed without much difficulty. In such cataracts the cortex may appear translucent, or amber-colored. Nor would it seem necessary in the case of well-behaved patients, when irrigation is used by an operator experienced in this practice. In this matter, I do not speak from experience, for I have not yet practiced irrigation, but I judge from the favorable comments made by colleagues whose judgment I respect, and the fact that the method is gaining in favor despite opposition formerly expressed.

CONCLUSIONS.

If, therefore, we grant the success and safety claimed by those of much experience in irrigation, the operation of ripening is indicated. 1. In case of immature cataract (not mentioned as contraindicated), in which a preliminary iridectomy is to be performed. 2. In those patients who would not be likely to behave well during the extraction, thus preventing the operator from performing much toilet or from practicing irrigation.

If irrigation is not practiced, trituration of the lens would be indicated in all patients with immature senile cataract under 60, in whom for reasons mentioned, relief is required.

Questions asked were:

1. Do you ever perform the ripening operation in the case of immature senile cataract?
2. Have you had any ill results from the operation; if so, of what nature?
3. Under what circumstances would you perform the operation?
4. If you do not perform the operation, what are your reasons? Are they based on your own experience?
5. Have you secured as good results after extraction following the ripening operation, as after extraction in the case of very immature senile cataract?
6. Do you find from actual experience that an operation for membranous cataract following extraction is required as often when the ripening operation has been performed, as after extraction of a very immature cataract?

OPINIONS OF PROMINENT OPERATORS.

HERMAN KNAPP, New York: I regard external trituration as efficient, and practice internal trituration or needling the anterior capsule at different places and use irrigation following extraction, but all of the ripening methods are more or less unsatisfactory; their shortcoming is insufficiency. Experience with the ripening operation has made me more conservative than I was formerly. I approve and do an artificial ripening of immature cataract (in selected cases), but prefer to let the cataract ripen naturally.

J. E. COLBURN, Chicago: 1. Yes, usually with preliminary iridectomy, direct massage (Bettman), followed in about ten weeks by extraction. 2. None that could be attributed to the procedure. One failure in 47 cases, due to prolapse of iris and secondary infection. Two cases of iritis, making good recovery. 3. When both eyes are involved, sufficient to prevent useful vision, and in monocular amblyopia. 5. Yes. 6. Yes, rather thick in some cases.

S. C. AYRES, Cincinnati: 1. Yes. 2. No. 3. When the opacity of both lenses was advancing about equally. 4. I never recommend the operation unless the perception and projection are good, and the eyes apparently healthy. 5. I never extract "very immature senile cataracts." My results after trituration have been very satisfactory.

A. E. PRINCE, Springfield, Ill.: 1. I frequently make a preliminary iridectomy in immature cataract, and use extraocular massage of the eye, after the iridectomy is completed. 2. I never had, to my knowledge, any unfavorable result which I can attribute to this operation. 3. I perform the operation usually in cases of middle life, where, from any cause, it is desirable to hasten the time of extraction. 5. I think the results are satisfactory after the ripening operation. 6. I consider the question of whether a membranous cataract is more liable to follow, to depend on the thoroughness with which the irrigation has been carried out. If considerable cortex is taken into the capsule, a membranous cataract would be liable to follow.

J. MOORES BALL, St. Louis: 1. Yes, frequently. 2. No. 3. In cases of slowly maturing binocular cataract. 5. Yes. 6. I am unable to say. I performed a number of these operations in the last fifteen years. I am partial to preliminary iridectomy. In nearly all cases in which I make a preliminary iridectomy I also triturate the lens directly, the so-called method of Bettman. I have done thirty or forty of these operations.

H. V. WÜRDEMANN, Milwaukee: 1. Yes. 2. No. 3. Slowly progressing lenticular opacities in both eyes of active adults under 60 years of age. Over that age the lens is sufficiently hard to permit of successful extraction, even though nearly clear. 5. Yes. 6. I endeavor (*a*) to extract lens in capsule; (*b*) failing in that, I make large capsulotomy with forceps: (*c*) I use lavage to remove lenticular débris, and hence, in recent years have much smaller percentages of secondary capsulotomies.

FRANK ALLPORT, Chicago: 1. Yes. 2. No. 3. When patient is blind in both eyes, but neither lens is ready for operation. Still, I prefer to operate on an immature cataract, rather than to ripen one artificially. 5. Yes.

C. D. WESCOTT, Chicago: It is my custom to do a preliminary iridectomy in all cases of immature senile cataract in which I operate. After making the coloboma, I usually stroke the cornea a number of times with the spatula, making sufficient pressure to bring it in contact with the anterior surface of the lense. A few times I have introduced the spatula into the anterior chamber, stroking the anterior capsule directly where it was necessary to use the instrument to replace the pillars of the iris. I believe that the ripening of the cataract is hastened by the iridectomy alone, and still more so by the procedure which I have described, although it can not be proved. My results have been satisfactory. I can not say that the operation for membranous cataract following the extraction is influenced by the procedure.

W. B. MARPLE, New York: 1. Only occasionally. 2. I have had no ill results. 3. I perform it less and less frequently and have not done it on any private patient. 4. In the nuclear cataract or sclerosed lens I get perfectly good results, even when vision is still good. If I had a patient whose vision was much impaired in each eye, from ordinary senile cataracts (not sclerosed lenses) which were immature, I would not hesitate to perform a ripening operation, but not if one eye was fairly good. 5. Yes. 6. I have seen no especial difference, as I use irrigation of anterior chamber rather freely.

GEORGE C. HARLAN, Philadelphia: 1. I have done it in a few cases. 2. No serious results. 3. When opacification is excessively slow, and vision is not sufficient to earn a living. 5. Better. 6. Experience too limited to decide.

H. GIFFORD, Omaha: 1. Yes, a discission. 2. I have twice had an infection of the lens, one with final good result and one with bad result. Both these cases were in old people. I now do preparatory discission on people under 50 years of age. 3. When in patients under 50 something has to be done to an unripe cataract, or allow the patient to go on indefinitely with poor vision. 5. About the same. 6. I think more often.

LUCIEN HOWE, Buffalo: 1. Yes, occasionally, Rhomer's method. 2. No. 3. Only when the condition of the other eye makes some such hastening essential. 5. About the same. 6. No difference ever observed. I must add, however, that it is still a question in my mind whether this or any other of the ordinary ripening operations does really ripen, at least, in the majority of cases.

S. THEOBALD, Baltimore: 1. Yes. 2. No, except at times a little rubbing off of the pigment from the posterior surface of the iris, near the pupil, and some iritis, more than would follow a simple iridectomy. 5. Better results. 6. I do not.

DUNBAR ROY, Atlanta: 1. Occasionally. 2. None. 3. In cases of preliminary iridectomy. 5. Yes. 6. It is not required as often.

H. F. HANSELL, Philadelphia: 1. I have operated in several cases of young senile cataracts, those developing in individuals under 50 years of age. 2. Yes, iritis. 3. In the circumstances mentioned under No. 1. 5. Yes. 6. I have found no difference.

EUGENE SMITH, Detroit: 1. Seldom. 2. No. 3. To enable patient to work when necessary to support family. 5. Yes, though greater danger of iritis. 6. Yes.

CHARLES A. OLIVER, Philadelphia: 1. Yes. 2. No. 3. Long-standing, uncomplicated (particularly unclean) cases. 5. Yes. 6. No.

WILLIAM CHEATHAM, Louisville: 1. Yes, iridectomy with massage on cornea of capsule. 2. No. 3. Any reason necessitating an early operation more often in those cases in which both cataracts are progressing evenly. 5. Yes. 6. Yes. My experience is not large enough for my statistics to be of much value.

N. M. BLACK, Milwaukee: 1. Yes, occasionally. 2. No. 3. In cases when there was some clouding of the lens sufficient to interfere with vision in a patient who needs to use eyes for purpose of carrying on his business. 5. Practically no good, I think. 6. Can not say.

LYMAN WARE, Chicago: 1. Yes. 2. No. 3. In cases of binocular cataract, when necessity compels use of eyes. 5. Yes. 6. Have no data, but think not.

J. H. CLAIBORNE, New York: 1. Yes. 2. No. 3. In slowly growing cataracts, chiefly in myopia, and in persons who can not afford to wait. 4. Yes. 5. Yes. 6. Yes.

C. R. ELWOOD, Menominee, Mich.: 1. I have not. 3. When both eyes were about equally advanced and ripening slowly, or probably if only serviceable eye was cataractous and ripening slowly. 4. I believe natural ripening safest, and my patients have happened to have one eye much more advanced than the other, or one lens ripe, when presented. 6. My experience has been only after natural ripening. With slowly ripening cataract in patient's only eye, I would do a preliminary iridectomy, and at the same time very carefully massage lens.

HORACE M. STARKEY, Rockford, Ill.: 1. Yes, the Forster operation as modified by Bettman. 2. No. 3. When vision is reduced in each eye by small, non-progressing or slowly progressing central opacities. 5. Yes, or as in mature senile cataract. 6. Have observed no difference.

A. E. BULSON, JR., Fort Wayne: 1. Yes, in the few instances in which I have performed preliminary iridectomy before cataract extraction. It is my opinion that preliminary iridectomy alone, without trituration, will hasten maturity of cataract. 2. No. Once had considerable swelling of lens, but it did not prove serious in results. 3. In the few instances in which preliminary iridectomy was indicated. In nervous patients, in whom manipulations to extract immature cataract might be disastrous, and seldom, if ever, in patients beyond 65 years of age, as there are no advantages to be obtained in such cases over extraction of immature cataract. 4. I do not believe advantages, taking all risks into consideration, are more than in extraction of immature cataract under proper conditions (combined operation, irrigation, atropin, etc.). 5. Yes, have only very few cases in which ripening operation was performed. 6. My experience is limited, but would say yes. I have not attempted the ripening operation except in a very few cases, and in all of those I started out to do a preliminary iridectomy with the intention of making extraction later. My experience has been that a preliminary iridectomy alone is sufficient in most cases to hasten the maturity of a cataract. Therefore, inasmuch as I do an iridectomy in all cataract extractions, it occurs to me that preliminary iridectomy is all that is indicated in case the operator does not care to undertake the extraction of an immature cataract by the combined operation. I have had such good results from the extraction of immature cataract that I have not given much thought to the value of the ripening operation, but I believe there is a place for the ripening operation, and I would probably prefer to use the operation, if used at all, in those patients having immature cataracts, who, from nervousness or other reason, give the operator a feeling that but little manipulation at the time of the extraction should be employed.

J. L. THOMPSON, Indianapolis: 1. The only perfectly safe ripening operation for immature senile cataract in my opinion, is a preliminary iridectomy. 2. I have never met with any ill results from this operation. 3. It is called for in cases of nuclear cataract in both eyes, when the acuity of vision is not sufficient for one to read large print, when the patient becomes tired of waiting, as he frequently has to do, for many years. 5. By this method I obtain better results than when I do iridectomy and extraction of the lens in one operation. 6. Fewer cases of thickened capsular threads are met with after this preliminary operation.

J. E. WEEKS, New York: 1. I have performed it, but do not do it now, except in cases in which I perform a preliminary iridectomy directly on the anterior portion of the lens capsule. 2. No, but I have not found that the lens substance escapes more readily, after the ripening operation than it does when the unripe or immature lens is extracted. 3. None, except when preliminary iridectomy was performed. 4. I have not found it to be of sufficient value to make it worth while. My opinions are based on personal experience. 5. About the same. 6. Yes.

S. D. RISLEY, Philadelphia: 1. I did so in a considerable series of cases, but abandoned the operation. 2. Never had any immediate ill results from inflammatory reaction. 3. I would not perform it under any circumstances. 4. My experience very soon taught me, or seemed to teach, that the difficulties of extraction were enhanced. The cortex seemed glued to the capsule, and the capsule itself tough and gray, in cases in which the cortex became opaque after trituration. In cases in which this did not follow, the lens, when amber colored or translucent, was found already hard, and operation therefore was unnecessary. 5. My results after ripening were no better; I think not so good. 6. I have no compiled statistics on this point, but my impression is that it is required as frequently and is usually more difficult because of greater toughness of capsule. I did the ripening operation in 25 consecutive cases of immature cataract, most of them by direct trituration of the capsule, some of them by the method of Forster, but I had such discourgaing results in the subsequent extractions as compared with the results obtained in the case in which the operation had not been done, that I was quite glad when I was through with them, and have never ventured on it since. This was about ten years ago. I do not think the operation is to be commended.

GEORGE E. DE SCHWEINITZ, Philadelphia: 1. Not often. 2. Once only, in secondary glaucoma from swelling of lens, the ultimate result was perfectly good. 3. In very slowly maturing central cataracts with much clear cortex in patients under 50. 4. It is best to wait for maturity, but no serious objections to removal of unripe cataract after 60, and do not advocate ripening operations. 5. Yes. 6. Yes.

W. H. WILDER, Chicago: 1. In certain cases I perform preliminary iridectomy, and at the same time practice massage of lens through the cornea, according to method of Forster. I never triturate the lens with an instrument pressed into the anterior cornea, as I used to do occasionally. 2. With two cases treated with anterior cornea trituration I had very serious results. Ih one of these there was violent reaction that fortunately subsided. In the other the reaction was so violent that the resulting iridocyclitis necessitated removal of the eye, which was found to have a choroiditis, together with posterior staphyloma, so that it would not have been a favorable case for any kind of intraocular operation. 4. The reasons given above have influenced me against performing the operation, for I would rather operate on an immature cataract and do a subsequent needling operation. 5. I am unable to judge. 6. I can not say.

T. R. POOLEY, New York: 1. I formerly did, but not now. 2. No. 3. None. 4. It is safer and better to wait, and the operation is easier and safer. 5. Yes. 6. I do not know; I have kept no statistics on this point.

O. F. WADSWORTH, Boston: 1. I have done so, not often, and not of late years. I presume you refer to massage after evacuation of aqueous. 2. Iritis, with posterior synocha, etc. 4. In part, I think the dangers from the operation at least as great as those which immaturity adds to the ordinary cataract operation. 5. In some instances, yes. 6. No.

A. A. HUBBELL, Buffalo: 1. Not for eight or ten years. Before that I practiced it considerably. I did a small iridectomy, and then with the elbow of a strabismus hook triturated (kneaded) the lens through the cornea. 2. None whatever. 3. None. 4. Yes, my own experience. I gave it up because the ripening did not always take place, especially when the opacity was nuclear, because the trituration or kneading affected only the anterior portion of the lens, but more particularly because removal of immature cataract without the ripening process gave just as good results. 5. Yes, but no better. 6. Yes.

C. S. BULL, New York: 1. I formerly did, but for some years have given it up. 2. None but failure to succeed, and in several instances the manipulation caused partial disappearance of the opacity. 3. This question is practically answered under No. 1. 4. This question is practically answered under No. 2. 5. No. 6. Fully as often.

O. DODD, Chicago: 1. No. 2. No serious results myself, but have seen very serious results from the operations I have witnessed by others. 3. Not at all. 4. In my experience it has been of no benefit, as the lens does not come out more easily or completely than without it. It is necessary to wait some time after operation before extraction can be done, and had rather do extraction and wait after for cortex to clear. 5. Yes, in the few cases I have done. 6. I think so, but my experience is not large enough to say.

E. E. HOLT, Portland, Maine: 1. No, not in recent years. 2. No. 4. My reason, take it all in all, is that it is better to perform the regular operation. 5. Yes, in the few cases in which it was employed years ago. 6. Not sufficiently to state.

P. A. CALLAN, New York: 1. I formerly did the operation, but not for several years. 2. Yes, iritis. 3. I should rather extract the immature cataract, having made a preliminary iridectomy. 4. I get better results from a preliminary iridectomy, as my results from the ripening operation were not satisfactory. 5. About the same. 6. Very little difference.

C. J. KIPP, Newark: 1. Not now. Years ago I did several, but as they failed to hasten the ripening materially, I have given up the operation. 2. No. 5. Yes. 6. Yes.

H. D. BRUNS, New Orleans: 1. Which operation? I have done iridectomy and trituration without much, if any, effect, often. Tried discission many times, years ago, with too much effect. 2. Senile eyes, on which discission has been performed, do not quiet down readily, and one has usually to do the extraction in an eye not entirely healthy. My experience is that the slightest pathologic condition, sometimes one which we hardly believe to have any importance, militates against perfect success in the extraction of senile cataract and the final result. I would rather take the chances of operation on a very unripe senile cataract, using lavage if necessary, if driven to it by humane motives, than risk discission and subsequent extraction. From trituration after preliminary iridectomy. I am not sure that I have seen any result. I write entirely from my own past experience.

O. A. GRIFFIN, Ann Arbor: 1. I did formerly, but rarely now. 2. Yes, an acute glaucoma, but it ended well. 3. When cataract exists in each eye, is partially matured, and the process has become stationary. 4. Have extracted immature senile cataracts in few cases without ripening, and obtained good results. 5. Yes, but not better, as stated above. 6. Have not sufficient data on this point.

A. R. BAKER, Cleveland: 1. Yes, formerly. 2. Yes, iritis two or three times, and glaucoma once. 3. I would not perform operation, except in patients under 45 years of age. 4. More satisfactory results are obtained by extracting immature cataracts, first making preliminary iridectomy and extracting immature lens, two or three weeks later, with preliminary capsulotomy. 5. No.

M. BLACK, Denver: 1. No. 3. I really can not conceive of any condition which would cause me to subject the patient to this unnecessary operation. 4. I believe the lens of a patient which is sufficiently opaque to demand extraction at all is hard enough to remove without preliminary ripening. If any doubt remains as to the cortical substance being all removed, anterior chamber irrigation should be practiced.

H. M. POST, St. Louis: 1. I performed the operation several times fifteen or twenty years ago. I have not done it since. 2. No. 3. I do not now think of any. 4. Under antiseptic precautions I do not hesitate to perform extraction with an iridectomy, as soon as the difficulty in reading is serious. I have had excellent results in such cases.

E. C. ELLETT, Memphis: 1. I do not do it now, though I have done it a few times. 2. No. 3. I would as soon extract an immature cataract as to do the operation. 4. I regard it as unnecessary. 5 and 6. Too few cases to say.

J. M. RAY, Louisville: 1. I did up to the last five or six years. 2. None, except I think that the massage produces adhesions of lens substance to capsule, and therefore the lens sticks and is more difficult to get out of capsule. 3. Only when there is one eye, and if I did a preliminary iridectomy I might massage the lens. 4. As given above, and from experience, I found myself less inclined to the operation, and more inclined to remove a semi-transparent lens. 5. I have no statistics on subject at hand. 6. While I have no exact data, I should think just as often.

C. A. VEASEY, Philadelphia: 1. No. 2. Difficulty in extracting the ripened lens, which is apt to adhere and to require greater pressure. There is more severe reaction. 4. As stated above, difficulty in expelling the lens, because of adherence, more frequent loss of vitreous delivery and more severe inflammatory reaction. 5. No. 6. I have not noticed any difference.

D. S. REYNOLDS, Louisville: 1. I have abandoned all ripening operations as unsatisfactory and unnecessary. Extraction of immature cataract is more satisfactory, because it saves time and avoids the complications of iritis, etc. 2. Yes, iritis frequently; opaque capsule; in two cases, cyclitis. 3. I formerly did it when both eyes were unable to read and neither mature. 4. Yes, as stated above. 5. Sometimes. 6. Yes.

A. BARKAN, San Francisco: The only operation for ripening cataract done in a normal eye, if slowly developing nuclear cataract, was an iridectomy. The cornea was very gently smoothed out by means of the strabismus hook. Reaction was very great. Iritis and slight cyclitis followed, and the case never came for operation subsequently. I have never since then done a truly ripening operation of immature or senile cataract. The preliminary iridectomy I have done repeatedly, especially when one eye was at stake, and with no results so far as ripening was concerned, but facilitating and rather helping to secure good results when the time for extraction came on the other eye. I am opposed to this measure on the grounds of conservative surgery, and think the massage, if done at all efficiently, is likely to be extended through the lens proper to the surrounding uveal membrane. I would certainly object to these operative proceedings on my own eye.

F. PARK LEWIS, Buffalo: 1. Of late years I have entirely given up the ripening operation. 2. In many cases it did not prove satisfactory. Ripening did not seem to be hastened in some instances; on the other hand, it seemed to retard the process of opacification. It moreover thickened the capsule and made it more unruly for subsequent management. 3. I doubt if any. 4. The reasons are as given as above, and are wholly based on my own experience. My reasons for not employing artificial ripening are that I believe that with normal salt irrigation or extraction in the capsule it is possible to get better results in the case of an unripe lens than that which follows when the capsule has been thickened by trituration. 5. My impression is that I have. I have not, however, made statistical comparison. 6. More so, with the same qualification as above.

WILLIAM CAMPBELL POSEY, Philadelphia: 1. Prior to five years ago I did several ripening operations for cataract, but I have given up the operation. I have found that I secured as good results in operating on immature cataracts without previous ripening, as I did when this operation was performed. 2. In one case, in which the lens was directly triturated, I think I obtained a detachment of the retina, as the tension became much diminished, and I feared for a time that the eye would be lost. Under treatment for detached retina, i. e., rest in bed with a pressure bandage, the eye finally gained its normal tension, the lens was removed and the patient obtained good vision, which has been retained for four or five years. I believe that the procedure of washing the anterior chamber after the removal of an immature lens has done away with the necessity for the preliminary ripening procedure.

D. T. VAIL, Cincinnati: 1. I have done so a number of times. 2. No bad results, in some cases the cataracts were not influenced. 3. None. 4. Yes. I find I can extract without, and the ripening is unecessary, also that it is not at all reliable. 5. About the same, but hard to judge; each case is its own rule. 6. Yes, all had to be discissed.

FLEMMING CARROW, Detroit: 1. I never perform a ripening operation in cases of immature senile cataracts. I remove the lens as soon as the patient begins to lose reading ability. I might say that in the last three or four years I always remove the lens when the patient loses reading ability. I do this because in such cases I have a little instrument with which I wash out the anterior chamber. Knowing that in cases in which the lens is immature, there is more or less of the lens débris left. To put it plainly, I always remove the lens, and I always wash out the anterior chamber after removing it. I do this, whether the lens is hard or soft, diabetic or otherwise.

WILLIAM ZENTMAYER, Philadelphia: 1. No. 4. Because in the exceptional cases in which it might have been indicated I have not hesitated to remove the lens, either after a preliminary iridectomy or with iridectomy at the time of extraction. 5. Not having done the ripening operation, I can make no comparison, but the results after the removal of unripe cataract have been satisfactory.

H. B. YOUNG, Burlington, Iowa: 1. Have done it once only. 2. No trouble of any kind. 3. Governed by the needs of immediate vision. 4. With Reik's flushing apparatus, I would about as soon extract the immature cataract. 5. In my one case, quite as good. 6. My patient was from a distance and I did not see him again.

A. J. DONOVAN, Butte, Mont.: 1. No. 2. A few years ago I had a severe reaction, increased tension and had to remove lens. Since then I prefer to do it at once, as I consider the rick to be less. 4. Yes, if the patient consents, I remove cataract as soon as vision is not useful. I always wash out the anterior chamber with boric-acid solution, and so far I have never had a single case in which I had cause to regret it.

G. C. SAVAGE, Nashville: 1. No. 2. I have never attempted it. 3. Under no circumstances. 4. For the reason that an immature cataract can be removed easily. 5. I have never done the former. 6. After any operation that does not include the removal of the capsule, the latter, sooner or later, becomes opaque.

H. B. ELLIS, Los Angeles: 1. I do not. 2. No. 4. Poor results in hands of others—no personal experience.

W. H. HULEN, San Francisco: 1. No, I prefer to extract the immature cataract in all the cases that have come to me, and, so far, my experience has been favorable in such cases.

F. B. EATON, San Francisco: 1. No. 3. Under 60 years of age in double cataract (uncomplicated) when vision in each eye was too low for earning a living and for endurance. 4. Rarity of my cases below 60 years and my fear of uveal trouble. They are not formed on my own experience.

MARK D. STEVENSON, Akron, Ohio: 3. In very immature, uncomplicated cataract in a patient from 30 to 40 years of age, when the vision of each eye is insufficient for the patient's common needs and vocation. 4. I avoid as much as possible the ripening operation for the following reasons: 1. At least two operations requiring opening of the eyeball are required, and of capsulotomy, with attending dangers. 2. If ripening is not performed, only one operation is sometimes needed, and two at most. 3. The danger of glaucoma. 4. Others have told me that the cortical matter is more sticky and is removed with greater difficulty after ripening. Personally, I can not say as to this.

LEARTUS CONNER, Detroit: 1. No, as it has not impressed me as helpful, while the extractions of such cataracts remained satisfactory. 2. I never did the operation. 3. I do not know any circumstances. 4. I think that there is less risk in immediate extraction. My results from this operation have been so satisfactory that I have no call for artificial ripening. 5. I never made the comparison. 6. I have no experience.

J. A. WHITE, Richmond: 1. Yes, I do this operation both with and without iridectomy—trituration through the cornea. 2. No bad results, except occasionally some iritis. 3. In very slowly developing cataracts, when both eyes are involved, and I do it on one only, and usually only when patient is under 60 years of age. 5. Yes, better. 6. I have not done enough immature extractions to make a fair comparison.

J. O. MCREYNOLDS, Dallas: 1. I have done so, but I have about abandoned the procedure. 2. None. 3. I do not favor the operation. 4. My experience has been that the operation secures no material advantages, but increases the number of operations. 5. Yes. 6. About the same.

CHAS. A. MAY, New York: 1. No. 4. No, I do not resort to the ripening operation, simply because I never hesitate to extract the immature cataract when vision is sufficiently interfered with to demand it, especially since resorting to irrigation of anterior chamber in these cases.

LEWIS H. TAYLOR, Wilkesbarre: 1. Practically, no. My experience is so limited with the ripening operation that I can not answer the other questions. I have done no ripening operation except a preliminary iridectomy. 2. No. 3. When a man had not vision enough to perform his work, and needed especially to earn his living. Even then, I think the immature cataract might be operated on, especially with irrigation. 4. It has seemed to me better to wait. I have no adverse opinion based on experience.

F. T. ROGERS, Providence: 1. I have done it frequently up to three or four years ago, when I became convinced that the immature lens could be safely extracted, and since then I have had no occasion to do the ripening operation, although I frequently do a preliminary iridectomy without disturbing the lens. 2. One case of dislocation of the lens. 3. When the vision was so impaired that the usual avocation could not be pursued, but the peripheral changes were not far enough advanced to promise a successful extraction. 5. Yes, save in one case. 6. I have noticed no marked difference.

E. E. HOLT, Portland, Me.: 1. I have not had occasion to do it for years. 2. No. 3. After stating all the facts, and the operation was selected by the patient or his friends. 4. I generally prefer to remove the lens direct. 5. Yes. 6. My experience is insufficient to make a statement.

L WEBSTER FOX, Philadelphia: 1. I do not. 2. No. 3. Only when the nucleus is translucent or sclerosed, and it becomes imperative to obtain better vision quickly. 4. It is always dangerous to operate on an unripe cataract. The early removal of an unripe cataract leads to a deal of trouble. 5. No. 6. More so, always requires a secondary operation.

GEO. F. SUKER, Chicago: 1. I have not employed it in the last five years in patients at or over 50. If under this age, and both lenses are in the incipient stage and vision is reduced so as materially to interfere with the comfort and occupation of the patient, then I employ Forster's method; but these cases are rare. 2. I have seen iritis follow, also failure to induce hastening or even actual maturation of the lens. 3. Under no circumstances, if patient is at or beyond 50 years of age. See No. 1. 4. At or beyond 50 the lens is readily delivered, even if not in the so-called mature state. In patients beyond 50, see my answer to Dr. Bulson's[1] questions on same topic presented at the Portland Session of the American Medical Association, 1905. 5. Yes, but ripening means the subjecting of the patient to an extra operation, therefore, another hazard. 6. If the capsule is in size peripherally in a line corresponding to the corneal section, capsular catracts are not so prone to occur. If the anterior chamber is thoroughly irrigated and every effort is made to remove soft substances, capsular cataracts are not more prone to occur than in any other method.

C. H. BEARD, Chicago: 1. Twelve to eighteen years ago I made a number of operations according to the methods then in vogue. I have not tried any of the later ripening measures, such as the salt irrigation of Jock, the hot-air douche of Wolfberg and the rapid method recommended by Bahr at the Lucerne congress. 2. I can not say that I noted any positive ill results. 3. I find no further indications for it, being satisfied with preliminary iridectomy and

the subsequent extraction of the lens, mature or immature, as the case may be. 4. Unwillingness to subject the eye to needless surgery and manipulation. My experience with artificial ripening caused me to conclude that the perplexities of the extraction were in no way relieved by it. The cortex, instead of being loosened from the capsule, seemed to be made more apparent and the extraction more difficult. 5. Certainly the results were not appreciably better. 6. Yes.

C. R. HOLMES, Cincinnati: 1. I did formerly, but do not any more. 2. Never very serious, but some unpleasant results, imperfect ripening requiring a repetition and rupture of the capsule and dislocation of the lens. 4. For the reason given above. 5. I have secured better results by extracting the immature senile cataract without ripening. 6. Not positive as to this point, but as the membrane varies in nearly all cases from a mere film to a dense membrane I needle in nearly all cases, as there is no reason why the transparent media need not be absolutely clear.

R. L. RANDOLPH, Baltimore: 1. No. 2. Nothing more than iritis. 3. Have no confidence in the operation. 4. Have operated, as well as I remember, about twenty times, and succeeded in ripening twice. In nearly all the cases had an iritis. 5. In the two cases, yes. 6. Am not prepared to say.

[THE SYMPOSIUM ON CATARACT, OF WHICH DR. TODD'S PAPER IS A PART, WILL BE CONTINUED NEXT WEEK.]

Clinical Notes

A CASE OF CARCINOMA OF THE SPINAL CORD.

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While carcinoma of the vertebral column is not so infrequent and may affect the spinal cord secondarily, the growth of a cancer in the cord itself is very rare and when it occurs its point of origin is usually in the meninges. Schlesinger[1] states that carcinoma in the interior of the vertebral canal, with the exception of that growing from the bony structures, is always secondary and very rare and that growths in the cord itself are exceedingly infrequent, having so far been found in cases of general carcinomatosis only. Spiller and Weissenburg,[2] in a recent review of the subject of carcinoma of the nervous system also speak of the rarity of growths in the spinal cord itself. Among the 11 cases which form the basis of their paper, there were 3 cases of cancer of the vertebral column with a fourth case presenting symptoms suggesting such involvement, which, however, did not come to autopsy, but in no instance was a growth, arising in the spinal cord itself, noted.

The rarity of this condition then and the fact that it was accompanied by secondary changes, which, in the absence of previous history, might make the diagnosis a matter of some difficulty seems to justify putting on record the following case:

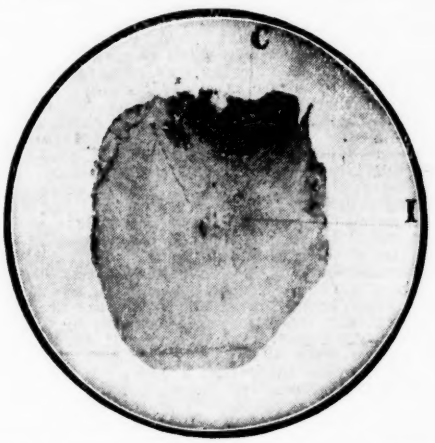
Patient.—Female, aged 65 years, a terminal dement, inmate of the State Hospital for 30 years.

History.—During the latter part of the spring of 1905 she was found to have a lump in her left breast. About six months later this broke down and formed an ulcer which would not heal. In March, 1906, it was noticed that she had difficulty in walking, and by the middle of April she could no longer get about. She was first examined by me Aug. 19, 1906, at which time she presented the following picture:

Symptoms.—Patient was much emaciated and bedridden. In the left breast was a tumor about the size of a small orange which had broken down and was discharging ill-smelling pus. Over the sacrum there was a bedsore about four inches in diameter with a gangrenous base, which had involved the bone. The movements of the head and upper extremities were normal. The legs were completely paralyzed, their muscles flabby and atrophied, and in them no reflexes could be obtained. The left leg was much swollen. The middle of the right thigh measured 11¾ inches, while the left thigh measured 31 inches. The circumference of the right calf was 5½ inches; the left calf, 9⅝ inches. The testing of sensation was unsatisfactory owing to the mental condition of the patient, but there was apparently complete anesthesia over both lower extremities. There was complete paralysis of the bladder with retention of urine and dribbling. She died Aug. 21, 1906.

Autopsy.—Thirteen hours after death an autopsy showed the following: Nothing was macroscopically abnormal in the brain. The bedsore over the sacrum had extended to the bone, causing an osteitis of the lower lumbar and sacral vertebræ whose bodies were soft and on manipulation crumbled to a grumous mass. There was necrosis of a considerable portion of the sacral arch on the left side. The spinal dura mater was thickened and pigmented. The cord in the lower lumbar and upper sacral regions was inflamed and softened to a pulpy consistency. The cervical and dorsal regions appeared normal and cross sections showed no gross changes above the softened area. The heart was small, pale and flabby, its valves normal. The lungs showed a few adhesions and were much congested. Distributed throughout both lungs were a great number of cancerous nodules varying in size from that of a millet seed to that of a split pea. The bronchial glands were enlarged. The liver contained a number of cancerous nodules of sizes varying up to that of a small orange. The kidneys were small, hard and contained extensive cancerous deposits. The aorta was much enlarged and there was thrombosis of the left external and common iliac veins.

Microscopic Examination.—Sections from the cerebral cortex showed much pigmentary deposit in the cells of Betz of the paracentral lobule and slight thickening of the pia-arachnoid. Sections of the spinal cord showed great thickening with round cell infiltration of the pia-arachnoid in the lower dorsal, lumbar and sacral regions. In the latter location there was extensive necrosis involving a large part of the posterior portion of the cord. This was most intense in the middle and lower lumbar region, the area affected becoming smaller as the upper lumbar region was reached. In the upper lumbar region, extending through less than one segment about the level of the border between the first and second segments, there was a small cancerous mass which had apparently grown from the pia-arachnoid into the anterior fissure. It had compressed the anterior pyramids, interfered with the anterior nerve roots and from it small nests of cells had invaded the anterior columns and anterior horn on one side. The whole cross section of the cord at this level was distorted (See illustration). The nerve cells here and in sections immediately below were swollen, showing intense chromatolysis and loss of nuclei. There was degeneration of the posterior columns extending from the lumbar region to the medulla. This was confined in the dorsal and cervical regions to the tracts of Goll. This degeneration was shown both by the Weigert and by the Marchi methods. The Marchi method demonstrated in the softened area in the lumbar region, diffuse degeneration, involving the whole cross-section of the cord. The cancerous nodule was, in structure, an adeno-



Photograph of cross section of the cord. C, cancerous nodule. I, infiltration of cancer cells.

1. Flatau, Jacobsohn and Minor: Handbuch der Pathologischen Anatomie des Nervensystems.
2. Jour. of Nerv. and Ment. Dis., August, 1906.

carcinoma. The nerves of the sciatic and lumbar plexuses showed no degeneration by Weigert's method, but by Marchi's method some of the sections showed some black scales. This was more marked in the nerves of the right side. The primary growth in the breast was an adeno-carcinoma, the metastatic deposits in the lungs, liver and kidneys corresponded with it in structure.

In this case the primary paraplegia was undoubtedly due to the growth of the cancerous nodule which interfered with the anterior columns and nerve roots and compressed the cord in general. The myelitis in the lumbo-sacral region was due to an extension of the inflammation from the bed sore through the bones. The ascending degeneration was due to this latter lesion.

LARGE SOLID TUMORS IN THE INGUINAL CANAL.

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RICHMOND, VA.

A REPORT OF THREE CASES.

I report the following cases because, from a casual search, I believe them to be somewhat unique both as to the gross and microscopic findings. The first two cases I saw with Dr. Stuart McGuire as his clinical assistant.

Fig. 1.—Drawing of section from specimen. Case 1. Magnified 400 diameters.

the third in consultation with Dr. M. E. Nuckols. For the microscopic findings I am indebted to Dr. E. Guy Hopkins, of the Laboratory Department of the University College of Medicine.

CASE 1.—Referred to the Virginia Hospital by Dr. G. S. Bell of Oriental, N. C., and operated on by Dr. Stuart McGuire, May 1, 1903.

History.—Mrs. W., aged 19, married, unipara, has always been a strong, healthy girl. She had the diseases of infancy, except diphtheria and scarlet fever. When she was 10 years old she fell across a wagon wheel and hurt her side, not

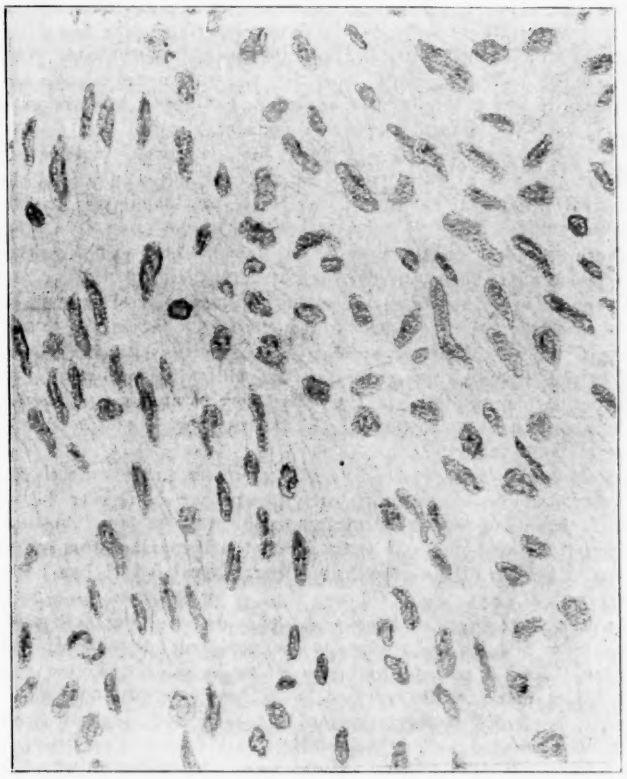

Fig. 2.—Drawing of section from specimen. Case 2. Magnified 400 diameters.

seriously enough to confine her to bed. She has been perfectly well, doing her own cooking, washing, and housework during her first pregnancy, which ended in a natural easy labor, with no physician present, just eight weeks before entering the hospital.

Two months after conception she noticed a small hard lump,

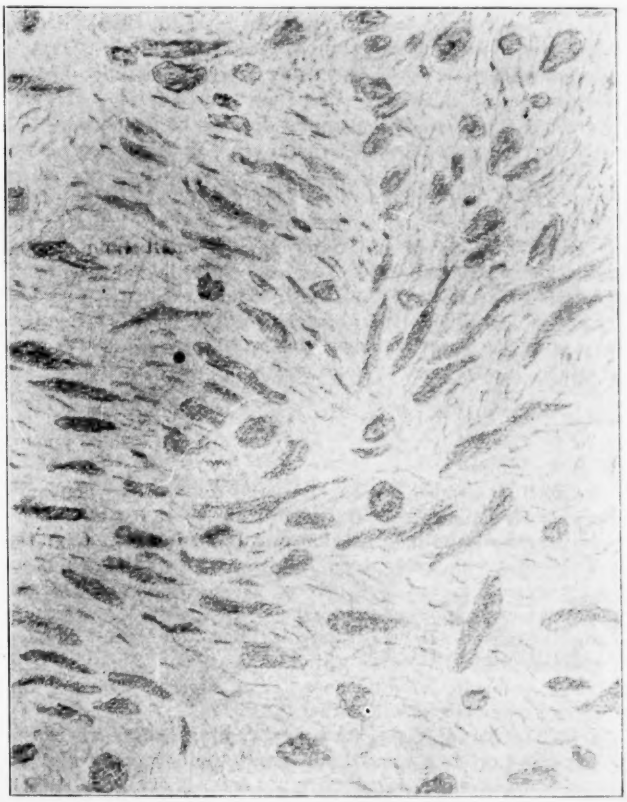

Fig. 3.—Drawing of section from specimen. Case 3. Magnified 400 diameters.

the size of a Malaga grape, painless and slightly movable, in the left inguinal region. It did not interfere with her daily work, and did not cause her any inconvenience whatever until after her baby was born, when, in the subsidence of the abdomen, it was not only very apparent, but began to grow rapidly, until it attained its present considerable size.

Physical Examination.—A hard, globular tumor was found about the size of child's head at birth, apparently occupying the right inguinal canal. It was freely movable, with smooth round surface, and was not attached to the uterus or the ileum. There was no pulsation or bruit and no enlarged inguinal nodes, nor was there any evidence of hernia.

Operation.—The thinned fibers of the external oblique were slit, and the tumor quickly hulled out of its bed in the canal. There was no pedicle. It seemed to have developed in the canal. The wound was closed as in Bassini's operation for hernia, for both the floor and roof of the canal were stretched to extreme thinness, requiring lapping of the external fascia and suturing to the right rectus.

Post-Operative Course.—The patient made an uneventful recovery and has since given birth to another child in a labor easier than the first, and unattended by a physician. At this time, three and one-half years after the operation, there has been no return of the growth, and her general health has been excellent.

Gross Appearance of Specimen.—The tumor was smooth and free from nodules and distinctly encapsulated. It weighed between 2 and 3 pounds, and was white in color. Section revealed a plane, white surface, with no cysts or pockets of fluid. The blood vessels were few in number and small in size, but all presented well defined walls.

Microscopic Appearance of Specimen.—The structural elements and their arrangement proclaimed it a fibromyxoma. The connective tissue cells were scattered without plan through a matrix consisting of myxomatous material, through which a tangle of tiny fibrils was interwoven. The preponderance of matrix over cells at once attested the benign character of the growth. As will be seen in Figure 1, the spindle was the prevailing type of cell, with thread like tapering ends characteristic of myxomatous tissue. The field shows no blood vessels, but in other areas vessels were noted, always with well defined walls.

CASE 2.—Referred to St. Luke's Hospital by Dr. J. P. Roy of this city and operated on by Dr. Stuart McGuire.

Patient.—Mrs. S. E. G., aged 26, married. Family history negative.

Personal History.—Had the mild diseases of childhood. Has two children, the youngest 2¼ years old. Menstruation always normal. Never did hard work or heavy lifting, or had a chronic cough that might cause hernia. Trouble dated from three years ago, when she first noticed a sharp pain in the left groin, and on examination found a small lump, which gradually increased in size. The local pain had persisted and increased in severity, especially in damp weather. She had also suffered occasional paroxysms radiating from the inguinal region over the lower abdomen and into the back. These were sometimes brought on by long walks or long standing. The tumor was uninfluenced by menstruation, and had never become inflamed, nor had it interfered with urination. It did not decrease in size on lying down, and did not affect her general health.

Physical Examination.—In the left groin, above Poupart's ligament, was a mass about the size of the closed adult fist, oblong in shape, and directed downward and inward. Over the mass the skin was freely movable. The veins of the skin were slightly engorged, but not markedly so. On palpation the tumor was hard and somewhat elastic in consistency, and could be slightly moved. It was clearly outlined, and seemed to have an attachment to the outer wall of the pelvis. There was no pulsation or bruit. About the anterior superior spine of the ileum there was marked tenderness.

In the region of the external abdominal ring, when the patient stood erect, a small lump about the size of an almond was seen, which disappeared when she was on her back. With a finger in the ring an impulse was felt on coughing, which was not noticeable elsewhere on the tumor. Percussion over the large tumor elicited a partially dull, but not a flat note. Heart, liver, lungs, spleen, etc., were normal.

Diagnosis.—Tumor of left inguinal canal, apparently attached to crest of ileum, probably osteosarcoma. Complication: Left incomplete indirect inguinal hernia.

Operation.—The thinned external oblique was slit up from the external to the internal ring, and the tumor exposed. It was firmly adherent to the fascia, and was attached by a broad pedicle to the inner aspect of the ileum. What was thought to be a hernia was found to be the cystic lower end of the tumor. It was hulled from its bed and its pedicle stripped away from the ileum. There was much bleeding from many thin-walled veins; this was readily controlled by pressure.

There was far more suggestion of malignancy about this case than in the preceding, both as to its bleeding and its firm periosteal attachment. Closure was effected as in Case 1, by uniting the cut external oblique to the border of the rectus over the approximated conjoined tendon and Poupart's ligament. The wound was drained by a stab wound, behind and below the anterior superior spine of the ileum.

Post-Operative Course.—The wound drained very freely, but united without pus formation. Patient made a good recovery, and at the present writing there has been no return of the growth.

Gross Appearance of Specimen.—An oblong mass, firm in consistency, with several loculi of clear fluid at the lower extremity. Section showed a firm surface, with many well defined vessel walls.

Microscopic Appearance.—In Figure 2 it will be seen that the intercellular structure is greater in amount than the cells, though the cells are far more numerous than in Figure 1. The matrix is of the same character as seen in Figure 1, but the cells, while still retaining the spindle shape, are shorter and more rounded at the ends. Vessels, where found, had well defined walls.

CASE 3.—Seen at the Virginia Hospital, with Dr. M. E. Nuckols, April 4, 1906.

Patient.—Negro woman, aged 23, with one child 3 years old. Family history negative.

Personal History.—Regular menstruation. Eighteen months ago a small tumor appeared in the left inguinal region and grew slowly and painlessly until a few days ago, when she began suffering with an aching pain in the region, which led her to seek relief.

Physical Examination.—A large, firm, somewhat oblong rounded tumor of the left inguinal canal, extended from the crest of the ileum beyond the median line. It was quite movable, though apparently attached to the ileum externally. It was not attached to the uterus, gave no bruit on auscultation, nor any impulse on coughing.

Diagnosis.—Myxomatous tumor of the left inguinal canal.

Operation.—This was performed by Dr. Nuckols just as were the foregoing. The tumor was easily separated except at its pedicle, which sprang from the periosteum over the anterior superior spine, from which it had to be torn. Care was taken to take a portion of the periosteum away with the pedicle, as the tumor was quite vascular, and had rather an ugly look. Repair of the canal was effected as in the two foregoing cases.

Post-Operative Course.—Uneventful recovery. Case lost sight of since leaving the hospital.

Gross Appearance of Specimen.—Firm, smooth, oval tumor, weighed 3½ pounds, presented a uniform interior, free from cysts.

Microscopic Appearance of Specimen.—As seen in Figure 3, the cellular elements, while more numerous than in either Case 1 or Case 2, still constitute less of the tisssue than its intercellular substance. The intercellular substance consisted of myxomatous material and fibrils like the foregoing. The prevailing type of cell here was also the spindle, though larger than the foregoing.

SUMMARY.

These tumors occurred in women between the ages of 19 and 26. All three had borne one or more children, and in one at least pregnancy seemed to accelerate the growth. Two of the growths sprang from the perios-

teum or fascia covering the inner face of the ileum, while one lay free in the canal, attached only to its coverings. All were of comparatively rapid growth, the average duration from the earliest detection to the time of operation being 22 months.

The growth was most rapid in the younger women. The smallest tumor was the oldest growth, occurring in the oldest woman. All were probably fibromata, which underwent myxomatous degeneration, and the first two were distinctly benign in appearance, but the size and appearance of the cells in Case 3, coupled with the proportion between the cells and the matrix, is suggestive of that strange borderland type which is so periously near to sarcoma.

1000 West Grace Street.

TURNIP TOP TREATMENT OF CHRONIC DIARRHEA AND AMEBIC DYSENTERY.

CUNNINGHAM WILSON, M.D., AND H. E. PRESSLY, M.D.
BIRMINGHAM, ALA.

Nothing has given more concern than the treatment of chronic diarrhea and dysentery. In reporting our experience in the treatment of such conditions with the boiled tops of the turnip, spinach, mustard and phytolacca we feel fully convinced of the specific action of this diet, and append the report of some cases so treated. Our attention was first called to this treatment during 1904 in the following manner: A patient, male, white, aged 28, consulted us for a chronic diarrhea. He had suffered for several months and had tried the various astringent and dietetic remedies commonly employed in such conditions. He was pale; had lost in flesh; had four to six stools a day with very little pain. The stools were chalky in color, semi-solid and very offensive. We advised him to go into a hospital, where he was put on rigid milk diet with astringent enemata. He grew worse, and his diet was changed to cereals and meat juice. On this he was kept for six weeks without much trouble, but gained nothing in weight nor strength. In disgust he left the city and went home, as we supposed, to die; certainly rest in bed and the hospital régime had not benefited him. Some months later he walked into our office a well man. He had gained largely in weight and had the appearance of perfect health. When we inquired for the cause of his recovery, he replied: "Poke salad" (phytolacca top). He had begun, shortly after leaving the hospital, to eat cooked sprouting tops of phytolacca and, when these could not be obtained, turnip tops, mustard or spinach, with the result stated. We watched this man for some time and saw him return to his regular work, bridge builder. We lost sight of him after a year, but have lately learned that he has died; from what cause we do not know. We have prescribed turnip or mustard "greens" in four cases of chronic diarrhea since this, and in every case the result has been most satisfactory. The diet at first should be rigidly "greens," and later cereals, as they can bear them. Meat seemed to be the hardest thing for our patients to digest.

We are giving the reports of six cases, four of chronic diarrhea and two of amebic dysentery. Of the patients with diarrhea one has died.

CHRONIC DIARRHEA.

CASE 1.—An old lady who had a severe chronic diarrhea, had all her symptoms relieved on the "greens" diet and went to the country for a change. While away it was impossible for her to get the diet; she had a relapse and died after six weeks in bed.

CASE 2.—Mr. A., aged 40, white, married, real estate agent. First noticed diarrhea January, 1905; until June, 1905, had irregular diarrhea, alternately better and worse. Had been put on a low diet with bismuth, but on the whole was losing ground, and the diarrhea continued. June 1905, he began taking "turnip greens" almost exclusively for four months; improvement was prompt, and he soon began to gain in strength and weight. The diarrhea was controlled at once. It is fair to say that for a while he took a mixture of chalk and bismuth. In a letter received from him to-day he states that he gained 10 pounds on this strict diet and he now eats anything, and has gained 15 pounds more, 25 pounds in all.

CASE 3.—Male, white, aged 45, railway conductor. First noticed diarrhea in March, 1902. His stools numbered from four to twelve a day, keeping up throughout the twenty-four hours; they were semi-solid, frothy, pale, chalky in color and of extremely offensive odor. There was no jaundice nor pain, but a great deal of gurgling in the bowels. He stated that milk always aggravated his symptoms. For twelve months he was sick this way, sometimes apparently improved for a day or two, only to relapse and find himself weaker than before. During this time he was able to work on an average one-third his regular time. He was continuously under medical care. In February, 1903, he began taking "turnip greens." He ate them exclusively for two weeks, and improvement began at once, even though he was taking no astringents. After two weeks his diet was gradually enlarged until at the end of two weeks he was on full diet. During this period he gained 30 pounds and felt well and strong. He now eats anything and is not troubled in the least; he occasionally eats the salad, but not systematically.

CASE 4.—Mrs. M., white, aged 65, first noticed trouble in the fall of 1903. Stools numbered from four to twelve a day; usually more trouble in the morning. Movements were pale yellow, semi-solid, frothy and very offensive. There was no jaundice. Milk always aggravated the symptoms. She endured this for eighteen months, taking the usual remedies with periods of temporary improvement, followed by relapses. In June, 1905, she began taking "turnip greens," and took them exclusively for three days and almost exclusively for six weeks. During this period she improved steadily; the diarrhea was controlled and she gained materially in weight and strength. She is still eating "greens" and with them anything else she wishes. Her health is entirely regained and she is as strong as she ever was. Weight on beginning treatment, 115 pounds; weight to-day, 148 pounds.

These facts have been obtained from the patients living to-day; we regret the incomplete record of the fatal case. Of the five patients, all but one had symptoms that closely resembled tropical sprue; the tongues were red and bare of epithelium; there was great weakness and pallor, with pale, semi-solid, frothy stools, but all did badly on milk. None of these cases had bloody stools.

Our experience with this diet in amebic dysentery, though limited, is most satisfactory. The two patients had tried all the ordinary remedies, and the first was ready to undergo an appendicostomy or an enterostomy. He had quinin and nitrate of silver irrigations, rest in bed, carefully restricted diet, and, in fact, had carried out every detail of directions given him, and his condition was extreme. The patient in the second case was not so bad, but he had given up his work and did not expect ever to return to it. He had been in the hands of good physicians, and we lost no time in putting him on "turnip greens." You will note the result in the report of the case below.

AMEBIC DYSENTERY.

CASE 1.—White, aged 29, married, merchant; was first seen Oct. 28, 1905. He gave a history of having had an attack of dysentery in 1904, lasting three months, and from which he seemed to recover. He had, however, never regained his for-

mer weight by fifteen pounds. In July, 1905, the dysentery returned with bowel movements of from three to ten daily. He was very pale and thin; the skin was dry, abdomen soft and slightly tympanitic, with tenderness extending from cecum over the entire colon. The bloody mucus, removed with rectal tube, was loaded with amebæ. None of the ordinary remedies had any effect on him; in fact, he grew steadily worse. From our experience in the diarrhea cases, he was put on "turnip greens" and his improvement began at once. In a month he had gained in strength and flesh to a remarkable degree. He was required to keep up irrigations of normal salt solution, but all other treatment was discontinued. By the end of the second month he was entirely well; he reports occasionally to show that he continues well, and he is able to take any kind of food.

CASE 2.—C. A., white, aged 30, locomotive engineer; was seen Oct. 8, 1906, and stated that on Jan. 6, 1906, he began to have bloody mucus discharges from his bowels; he was able to continue work most of the time until July, 1906, when he had to take to his bed. He was able to be up part of the time, but would often have from eighteen to twenty bowel movements a day. His appetite was ravenous. There was a great deal of tenesmus and he was very thin and anemic; examination of the chest was negative; there was some tenderness over abdomen. Bloody mucus removed from rectum showed abundance of amebæ. He was put on "turnip greens" at once, of which he would take four or five meals a day; at the end of two or three days he was entirely relieved of his tenesmus, and the bowel movements were becoming much less frequent. He was kept in bed most of the time for the next month, taking nothing but "turnip greens" for the first two weeks, when he began to increase his diet by the addition of a glass of milk and a little toast. November 15 he began to lose his appetite; his skin looked thick and his tongue was heavily coated; he was given 1/10 gr. calomel three times daily. He thought this did him a great deal of good and he kept it up for two weks. December 1 he returned to his work and is now as well as ever.

It may be as well to add to this report the fact that we have recently seen two patients suffering from well-defined stomach ulcers take this food when everything else disagreed. One has, to all appearances, recovered. He was extremely weak when he began the diet, having just had a severe hemorrhage from his stomach. He could take this food without pain or inconvenience and is now entirely free from symptoms and in better health than he had been for years. The other case was reduced to the last extremity when he was given this diet. It caused him no pain and he took it with a relish, while he was unable to take any other food without great pain. He died from exhaustion.

It may be well enough to speak of the preparation of "turnip greens." It is a common diet all over the South, especially in the country districts. The tender young sprouts of the common poke (phytolacca) are also used in the same way among the negroes and poorer classes. The cooking is of great importance, as the dish is most unpalatable when badly cooked. In the preparation of the turnip greens, ordinary bacon is used, which is boiled about half an hour, and then the turnip tops, spinach, mustard or phytolacca tops are added and let boil from one to two hours.

MATERNAL IMPRESSIONS.

J. W. ROBINSON, M.D.
M'CAMMON, IDAHO.

The article and discussion on "Superstition in Teratology" in THE JOURNAL, Jan. 26, 1907, prompts me to report the following case, as I believe that only collection and comparison of statistics, in addition to careful study of cases, will clear up the subject.

Patient.—Mrs. T., aged 36, American, white, mother of five children.

History.—The youngest child is 4 years old. At the age of eighteen months it suffered from what was evidently anterior poliomyelitis, but had no medical attention. Before the attack the child was able to walk, but following the attack it was unable to do so. Six months later the parents consulted a physician who diagnosed the trouble as "hip disease." He did little in the way of treatment, and did not help the child any. Examination of the child in November, 1906, by Dr. W. F. Howard and myself, showed a talipes equinovarus of the left foot. Measurements showed one inch shortening from the anterior superior spine of the ileum to the internal malleolus. The left calf was one inch smaller than the right. Appropriate treatment was instituted.

In November, 1906, I was called to attend Mrs. T. in labor at term. The child was a healthy male, but with well-marked talipes varus of the right foot. This was easily reduced, but returned almost immediately. One month later I over-corrected it and held it in place with a plaster cast.

The mother had worried very much over the possibility that the child might have a deformity similar to that of her other child. Whether the occurrence of the deformity is a mere coincidence or not I do not know nor claim to explain.

DUPLEX STETHOSCOPE.

P. A. AURNESS, M.D.
MINNEAPOLIS.

This instrument consists of a metal shell, forming two focalizing sound-wave receivers having a common central body and sound-exit. An adjustable hollow plug attached to flexible transmission tubes permits the use of the larger or smaller receiver simply by half turning the plug. As made for me by the American Rubber Company, Minneapolis, the receivers, covered by a drum membrane, are of a metal composition (copper, zinc and lead), found very dead to air vibration—a feature of importance in the transmission of pure chest sounds and in the elimination of instrument vibration or the auto-adventitious noises commonly found in instruments of this kind.

Sound-refractory lenses (sound, like light-waves, being subject to refraction), adjusted so as to focalize the sound-waves at the sound-exit, make the instrument one of unusual sensitiveness and accuracy. The flexible tubes, wound around the neck of the instrument, permit it to be conveniently carried in the vest pocket, occupying only the space of an ordinary watch. The ear tips are made to fit the auditory canal by a sliding, adjustable rubber ring in order to more effectively exclude disturbing sounds.

The objects attained in the design of this instrument are superior efficiency combined with simplicity of style and construction.

Cause and Effect.—Don't think you can sow the seeds of disease and reap a crop of health. The books of Nature are squared occasionally and full account is exacted for every item.—*Journal of the Outdoor Life.*

New and Non-Official Remedies

THE FOLLOWING ARTICLES HAVE BEEN TENTATIVELY ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR INCLUSION IN THE PROPOSED ANNUAL, "NEW AND NON-OFFICIAL REMEDIES." THEIR ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT, BUT TO SOME EXTENT ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE FINAL ACCEPTANCE AND PUBLICATION IN BOOK FORM.

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT SO FAR AS KNOWN IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

(A list of all accepted articles is published on one of the advertising pages of The Journal in the first issue of each month.)

(Continued from page 421.)

VIOFORM.

NIOFORM. IODOCHLOROXYQUINOLIN.

Vioform, $C_9H_4N.OH.I.Cl = C_9H_5ONClI$, is a substitution compound of anachlor-orthohydroxy-quinoline, resulting from the introduction of one atom of iodine.

Hydroxy-quinoline is first chlorinated and dissolved in an alkaline solution, which is then treated with a solution of iodine in potassium iodide when a voluminous yellowish brown precipitate of vioform is produced. This is washed with a solution of sodium thiosulphate to remove free iodine and then with 1 per cent. hydrochloric acid until the dried residue melts at from 170° to 175° C. (338° to 347° F.).

It is a very voluminous, greenish yellow powder; crystallizing from glacial acetic acid in needles melting at 177° to 178° C. (350.6° to 352.4° F.), practically odorless, and insoluble in water and slightly soluble in alcohol; it permits sterilization without decomposition; it is about six times as bulky as iodoform.

Vioform contains 41.57 per cent. of iodine—it gives a green coloration with Millon's reagent or when the alcoholic solution is treated with ferric chloride solution. It dissolves with a brown color in concentrated sulphuric acid and the solution evolves iodine on warming. If this solution, after driving off the iodine, be diluted with water, chlorine can be demonstrated by the usual test with silver nitrate. If a solution of vioform in chloroform is shaken with nitric acid, the chloroform acquires a violet red color, and the nitric acid becomes somewhat yellow.

Actions and Uses.—It is antiseptic, haemostatic, cicatrisant; non-toxic and non-irritant. It is claimed to be an ideal substitute for iodoform, preventing decomposition in wound secretions to a much higher degree, and drains and tampons may be left *in situ* for a considerable time.

Dosage.—As dusting powder, and as ointment, spray, suppository, or in form of gauze (which see).

Manufactured by Baseler Chemische Fabrik, Basel, Switzerland (C. Bischoff & Co., New York). German Patent No. 117,767.

VIOFORM GAUZE.

Gauze impregnated with a solution of 10 Gm. (150 grains) of vioform, 50 Gm. (750 grains) of absolute alcohol, 10 Gm. (150 grains) of sugar, 25 Gm. (375 grains) of glycerin, and 500 Gm. (1 1/12 pints) of water.

Actions and Uses.—See Vioform.

Manufactured by Baseler Chemische Fabrik, Basel, Switzerland (C. Bischoff & Co., New York).

CELLOIDIN.

A name applied to a preparation of the character of a purified Pyroxylin, U. S. P.

Celloidin is prepared by solution of pyroxylin in a mixture of alcohol and ether, filtration and recovering the solvent from the filtrate. It is supplied in shreds immersed in water.

Manufactured by Chemische Fabrik auf Actien, vorm. E. Schering, Berlin, Germany (Schering & Glatz, New York). U. S. patent No. 299,857.

COMPOUND EMULSION PETROLEUM, S. & D.

An emulsion containing 5 per cent. of refined petroleum and 28 1/3 per cent. petrolatum oil with 0.6 Gm. (10 grains) of calcium hypophosphite and 0.6 Gm. (10 grains) of sodium hypophosphite in each 30 Cc. (one fluidounce).

It is a white emulsion practically free from odor and taste.

Actions and Uses.—It is claimed to be a stimulant, diaphoretic and expectorant.

It is claimed to be useful in catarrhal affections of the respiratory tract.

Dosage.—8 to 16 Cc. (2 to 4 fluidrams) three times a day.

Manufactured by Sharp & Dohme, Baltimore, Md.

DUOTAL-HEYDEN.

A name applied to Guaiacolis Carbonas, U. S. P.

Manufactured by Chemische Fabrik von Heyden, Radebeul, near Dresden, Germany (Schering & Glatz, New York). U. S. patent No. 466,913. U. S. trademark No. 28,957.

ESSENCE OF PEPSIN-FAIRCHILD.

A solution of the milk-curdling and proteolytic ferments of the gastric glands in a menstruum containing 18.5 per cent. of alcohol by volume.

The solution is prepared by direct extraction from the peptic glands of the stomach.

One Cc. will curdle 250 Cc. of milk at 38° C. in a few minutes, and dissolve 25 Gm. of coagulated egg albumin when tested according to the directions of the United States Pharmacopeia.

Actions and Uses.—Essence of pepsin has the action of rennin and of pepsin and is recommended by the manufacturers for preparing milk for ingestion and in cases in which pepsin is indicated.

Dosage.—4 Cc. (1 fluidram) or more.

Manufactured by Fairchild Bros. & Foster, New York.

FIBROLYSIN.

Fibrolysin is a sterilized solution of a double salt of thiosinamine and sodium salicylate ($NH_2.CS.NHCH_2.CH:CH_2$) + $C_6H_4(OH)(COONa)$, containing 15 per cent. of the double salt.

It is prepared by mixing the two components in solution.

It is an aqueous odorless solution. It does not keep well in the air but is marketed in sealed, brown glass vials, each containing 2.3 Cc. (37 minims) of the solution, equivalent to 0.2 Gm. (3 grains) of thiosinamine.

The tests are those of thiosinamine and sodium salicylate.

Actions and Uses.—Those of thiosinamine (which see), with the advantage of quicker absorption and freedom from pain or irritation, on account of its solubility and aqueous vehicle.

Dosage.—The contents of one vial (2.3 Cc. = 0.2 Gm. thiosinamin) by subcutaneous, intramuscular or intravenous injection; one injection being administered daily or every second or third day.

Manufactured by E. Merck, Darmstadt (Merck & Co., New York). U. S. trademark No. 49,160.

HEMOL.

REDUCED HEMOGLOBIN. PARAHEMOGLOBULIN. HEMOGLOBIN DEOXIDIZED BY ZINC, MERCK. HAEMOL.

Hemol is an organic iron compound produced from blood by reduction.

Neutralized blood is shaken with zinc dust and water and the zinc removed from the product of the reduction (Zinc parahemoglobulin).

Hemol is a dark-brown, almost tasteless powder, insoluble in water, alcohol, etc. It contains traces of zinc oxide.

Actions and Uses.—It is claimed to have the action of an organic iron compound.

Hemol is claimed to be useful in anemia, chlorosis, etc.

Dosage.—0.12 to 0.5 Gm. (2 to 8 grains) in powder with sugar or in wafers.

Manufactured by E. Merck, Darmstadt (Merck & Co., New York) U. S. patent No. 541,933.

(To be continued.)

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 DEARBORN AVENUE . . . . CHICAGO, ILL.

Cable Address . . . "Medic, Chicago"

Subscription price.....Five dollars per annum in advance

[*For other information see second page following reading matter.*]

SATURDAY, MARCH 9, 1907.

CERVICAL RIBS.

The Bible story of the creation of Eve from one of Adam's ribs is doubtless responsible for the not uncommon impression, even among intelligent laymen, that the male sex normally possesses one less rib than the female. Scientific knowledge of accessory ribs dates back to antiquity, and, on account of the fact that they are not only more frequent, but also more easily detected and more apt to give rise to symptoms, most attention has been given to cervical ribs. Of recent years, presumably on account of the use of the *x*-rays, cervical ribs have been frequently described, but as yet no extended discussion of the symptoms which they may produce has been incorporated in the average text-book.

The accessory ribs are due to errors in development of which we have no certain knowledge. The abnormal rib, or ribs, for they are often bilateral, may exist alone, or, as is common with developmental errors, may be associated with other defects, especially with lesions in the spinal cord. The manner of their development is easily understood when it is recalled that the normal ribs are merely modified processes of vertebræ, and these same processes in a rudimentary condition are always to be made out in the cervical, lumbar and sacral regions. The cervical ribs usually spring from the seventh cervical vertebra, are often bilateral, and may terminate free in the tissues of the neck or articulate with the first rib or the sternum. As Barker has shown, all varieties of articulation with the vertebræ and all sorts of shapes and terminations are met. When the ribs are bilateral, and the *x*-ray has shown that this is much more frequent than was formerly supposed, one is usually much larger than the other, so that symptoms of cervical rib are usually unilateral.

It would be expected that cervical ribs, being congenital, should give rise to symptoms in early life. As a matter of fact, this is not the case, most individuals showing no symptoms before the age of 15, while not infrequently the signs first appear late in life. This has been explained by the fact that until the rib has reached a certain size it can not exert pressure on important structures. Other observers ascribe it to greater fixity of the rib after the period of ossification, and still others to the alteration in relation to other structures due to sagging of the shoulders from lack of muscle tone from advancing age. In individuals with arterial changes the effect of age on the arteries must also be considered. In any event, it is by no means unprecedented for a lesion to be present for years without producing symptoms, these suddenly appearing coincidently with some condition depressing the general health.

The symptoms of cervical rib are admirably analyzed by Keen[1] in a recent article, which should be consulted by all wishing full details on the subject. Local symptoms are necessarily present, as the extra rib appears in the neck as a bony prominence, usually one or two fingers' breadths above the clavicle about its center. The tumor is usually hard, rounded and immovable, though in some instances slight mobility may be made out. Attention has been called by several observers to the unreliability of palpation alone in detecting cervical ribs, and Keen strongly advocates the use of the *x*-rays in all doubtful cases. There seems more danger of diagnosing a cervical rib when it is not present than of making the opposite mistake. The most important symptoms of cervical rib are due to its anatomic relations with the nerves and vessels of the neck. In the individuals who present symptoms, perhaps 10 per cent. of those who have the accessory rib, the most prominent are neuralgic pains in the neck and radiating down the arm or to the head or chest. Signs of pressure on the lower strands of the brachial plexus are common, and disturbances of sensation in the arm and hand, sometimes of an elective character, are to be expected. In a few instances there have been signs of a paralysis of the cervical sympathetic nerve on the side on which the rib was situated. The relation of the rib to the great vessels at the root of the neck may also cause weighty complications. Aneurism of the subclavian artery has been described, but it seems likely that many cases thus catalogued were not true aneurisms, the fact that the vessel passes over the rib often giving rise to a false impression of dilatation. In some cases thrombosis of the artery with gangrene of portions of the fingers has occurred, and more or less impairment of the arterial circulation is common. Similar changes may take place in the vein, but edema in such instances seems to be rare. Changes in the muscles, in the form of wasting of the arm, and even of the shoulder girdle and chest, on the affected side are seen, and there may be an inability to perform the finer finger movements. The subject is an interesting one, and though not of paramount importance should be borne in mind in all unilateral painful affections of the neck and upper extremity whose origin is obscure.

PROGRESS OF PHYSICIANS' REMUNERATION.

In an article in the well-known French magazine *Revue des Deux Mondes* a distinguished French writer on economic and social questions, le Vicomte Georges d'Avenel,[2] discusses the fees that have been paid to physi-

1. Amer. Jour. Med. Sci., February, 1907.

2. Vicomte Georges d'Avenel began a course of lectures on Economic History at Harvard University, February 27. He is recognized as the leading French historian.

sicians in France for the last seven hundred years. This article is one of a series on the richer classes since the middle ages and is of special interest because it furnishes ideas for the estimation of the comparative amounts paid the different liberal professions, law, medicine and teaching. His figures are given in terms of the money of the present day, that is, not only converting the intrinsic value of the gold and silver of that time into terms of modern French currency, but also transforming it so as to make it express the buying value of money in our own day.

The physician, like the artist, and very often the literary man of the middle ages, could only obtain a definite salary by being attached to the court of a prince or to the domestic circle of a member of the nobility. These royal physicians received what would not be considered very good salaries at the present day. The physician to Charles the Wise of France, it is true, received 22,000 francs, about $4,500, and the medical attendant of the Prince Royal of Aragon about 15,000 francs, nearly $3,000, but these, like the 20,000 francs allowed to the chief physician of the Court of Queen Anne of Brittany at the end of the fifteenth century, were extremely exceptional. Practically, salaries ranged from 4,000 to 8,000 francs, that is from $800 to $1,600. The Duke of Burgundy in the thirteenth and fourteenth centuries had two physicians, the first of whom received about $1,500, the second less than $1,200. The Duke of Berry's physician and the medical attendant of Queen Isabelle of Bavaria each received scarcely more than $1,100. Salaries were on the increase, however, for the physicians-in-ordinary and the surgeon of the Archduke King of Spain at the end of the fifteenth century were each allowed $1,400. The Duke of Orleans in the middle of the fifteenth century paid his physician about $900, but then his grandfather a century before had paid his medical attendant only a little more than $300.

Most of these physicians had few opportunities of adding to their salaries by attendance on members of the nobility besides their official patrons. There seems to have been some objection to physicians devoting themselves to others, as if it did not quite become the physician of a ruling prince to wait also on his subjects. These royal physicians, however, often had opportunities to rise in a political way that compensated them for their comparatively meager salaries. In daily relations with the ruler they were often asked for advice in other matters besides those relating to medicine, and so became royal counselors. The physician of Louis XI, Jacques Coictier, became president of the chamber of finance and eventually a millionaire. He was able to give Charles VIII two million and a half of francs ($500,000) to enable him to escape from his enemies. John de L'Hopital, the physician of the Constable of Bourbon, became the auditor of finance in Auvergne and left a fortune to his son, who afterward became the famous chancellor.

The nearer we come to modern times the more do the remunerations accorded to physicians increase in value. During the seventeenth and the beginning of the eighteenth century the various physicians of Louis XIV received as much as 100,000 francs ($20,000), and at least one of them, the famous Aquino, was the recipient for a time of 170,000 francs a year, considerably more than $30,000. Not only did the salaries physicians received increase in value, but the estimation in which they were held also became higher. During the preceding centuries they became members of the court in lower places of power, but their professional dignity was not the subject of much respect. The famous Vicq-d'Azyr, however, the physician of Louis XV, not only received a large salary, but was looked on as a distinguished scientist and associated on a footing of equality with the encyclopedists.

By this time another important change had come over the public attitude toward the profession. The better classes generally had not cared before this for the attendance of a physician who also waited on the poor. Now they began to seek especially those whose experience among the poor in the hospitals fitted them better for the successful practice of medicine.

With this the modern era begins and the physicians' remuneration continues to go up. At the present moment there are in Paris, according to the writer of the article referred to, at least a half score of surgeons who make more than $100,000 a year. While physicians are not as a rule paid so well as surgeons, there are at least as many medical specialists who receive more than one-half this amount annually. There are about forty leaders in medicine who make between $20,000 and $30,000 a year,; that is as much as the chief physicians of the Great Monarch two centuries ago, eight times as much as the royal physicians four centuries ago, and from twenty to twenty-five times as much as the queen's physician of five centuries ago. The outlook for medicine as a lucrative profession in France is most promising but for the one fact that the number of physicians has more than trebled during the last half century, while the population of France has only increased one-tenth.

This is the danger of professional degeneration—that the numbers shall become so great as to make the proper maintenance of professional dignity impossible. Here, it may be said, is the problem that many nations are facing at the present moment, our own country included.

MEDICAL EDUCATION AND THE STATE.

Medical education to-day is an entirely different problem from what it was twenty-five years ago. The expenses connected with a thoroughly equipped modern medical college have at least quadrupled during the last quarter of a century. Such schools can not be main-

tained by the fees that medical students are able to pay. Considerable though the income from this source may be, the actual *per capita* cost of a good medical education, everything considered, far exceeds the fees paid in by the student. No one at all familiar with the actual situation will take exception to these general statements. Their truth may be taken for granted.

Medical education here, as well as everywhere else, consequently depends on private endowment and state aid for adequate support. Were it not for this support medical education in this country would be doomed to remain at a shamefully low standard and medical research would suffer unmeasurable harm. The heaviest sufferer would be the public. Munificent though the private endowments to the cause of medical education have been in the past, and hopeful as the outlook is for further aid in the future from this source, the state is not released from all responsibility on this score. Many states in the Union have recognized this fact and medical departments have been organized, in some instances many years ago, in other instances recently, in connection with the state universities. Michigan, Minnesota, Iowa, Virginia, California, Texas and many other states are fully committed to this policy. Wisconsin has just embarked on the interesting scheme of providing on a true university basis for the first two years of medical work, the student to secure his clinical training where he may choose, but with the privilege of returning to the university for his final degree if he sees fit to do so and complies with certain regulations. To the friends of progress in medical education this step is a welcome one because it means the annual appropriation by the state of a considerable sum of money to instruction and research work under especially favorable conditions in the branches fundamental to clinical medicine.

In another state, namely Illinois, which already is committed to the support, at least in some measure, of medical education in connection with its university, an earnest effort is now under way to place the medical work on a firmer footing and wholly in the hands of the university. If the present plans are carried to a successful issue the University of Illinois will come into possession of the commodious and conveniently-located buildings which it now rents of the original College of Physicians and Surgeons in Chicago, the corporate existence of which institution then ceases. To this end the university has asked the legislature of Illinois to appropriate $386,000. The plan has the approval of the deans of the two large rival schools of high standing in Chicago and of influential medical men throughout the state generally. Its realization is in every way desirable because it will enable a powerful state university, the trustees and president of which have high ideals, to enter into immediate and efficient co-operation with leading schools in raising the standards of medical training and in the promotion of medical research.

Movements like this which look to the support of medical education by public means should be promoted by the intelligent physician within his own special sphere of influence. It is important and necessary that the proper attitude toward medicine should obtain among the various classes of people. For when the people of our state realize the value to the community (and to mankind in general) of an active, progressive medical science in their midst there will be less difficulty in securing proper support of medicine in our state universities and in other ways.

QUALIFICATIONS NECESSARY FOR THE USE OF WRIGHT'S VACCINE THERAPY.

The treatment of various infections, especially chronic, according to Wright's method by means of sterile vaccines prepared from the corresponding microbe, is attracting much attention in the English-speaking medical world. In the hands of experts the method seems to achieve results that promise well for a degree of permanent future usefulness. On account of the exact laboratory method of procedure vaccine therapy for a long time to come must remain in the hands of those that are especially qualified to carry it out. Probably a brief exposition of the difficulties—at present in most cases insuperable—in the way of the general practitioner's himself taking up this treatment, may not be without interest.

It must be borne in mind that Wright bases the treatment on the consideration that in many localized, chronic infections bacterial products may fail to reach the circulating blood in sufficient quantities and at proper intervals to stimulate adequately the machinery of immunization or self-healing and that it is in order to supply the necessary stimuli in proper doses that sterile vaccines prepared from the particular microbe causing the infection in question are injected. Hence it becomes absolutely necessary that an exact etiologic diagnosis be made in all affections that it is proposed to treat with specific vaccine therapy. The use, for instance, of gonococcus vaccine in the treatment of a chronic streptococcus or pneumococcus arthritis would be a fundamental mistake.

In the next place in order that the vaccine may be the one most suited for the individual case it is regarded as highly desirable, and even essential, that the vaccine be prepared from the particular strain causing the infection. This involves the isolation in pure culture of the bacterium in question, the preparation therefrom of sterile, potent vaccine, the proper dose of which is to be determined by special methods. Eventually we may learn that certain stock vaccines may be used with satisfaction, as now is the case in regard to tuberculosis in the vaccine treatment of which Koch's new tuberculin is employed.

Finally, in order to determine the immediate effect of the vaccine and to interspace the injections properly it

is necessary that the way in which the body reacts to the combined effects of the injections and the infection be tested from time to time. This is now done by determination of the opsonic index, a procedure that requires special facilities, some skill and much time. There is good reason to believe that persistent, ill-timed injections of vaccine, without giving the patient time to recover from the primary depression of the antibacterial powers that follow after each injection, may do great harm, and it is in order to avoid this, as well as to obtain direct evidence that the vaccine actually does stimulate the apparatus of immunization, that it is essential at least in the present stage of our knowledge to estimate the opsonic index.

The only infection in which an exception to this might be made would seem to be chronic local tuberculosis, provided the doses of tuberculin are small (1/1000 mg. by weight of bacillary substance) and the intervals between the injections 10 to 12 days. Clinical experience with tuberculin in the hands of careful, critical observers like Trudeau before the days of opsonins indicates that this would be a safe course.

It is evident that for the reasons briefly outlined vaccine therapy for the present must be delegated to specially trained persons with adequate facilities such as may be supplied in connection with laboratories. Already a number of special services of this kind have been established in this country, and it is by the accumulation of a substantial body of facts through painstaking and discriminative observations by competent persons in various places that the more precise field of usefulness of vaccine therapy and the best mode of its practical application within that field eventually will be determined.

CANCER CACHEXIA.

Up to the present no satisfactory explanation of the characteristic cachexia of cancer patients has been furnished. Although occasionally some one has reported the occurrence of "ptomains" or similar substances in the urine, these observations seem to have been either inaccurate or without significance, and generally both. Repeated examinations of tumor tissues have also failed to demonstrate the presence of any characteristic toxic substances that might account for cancer cachexia. Perhaps the most reliable positive finding is the frequent but by no means constant hemolytic property of extracts of cancer tissue, which might account in part for the anemia common in cancerous patients; but the typical cancer cachexia is something more than merely an anemia.

In spite of this paucity of positive findings, it is easy enough to imagine sources from which cachexia-producing poisons might arise, and the chief marvel is, perhaps, that more positive results have not been obtained. For example, it is quite probable that cancer cells, like all other tissue cells, produce by their metabolism substances which enter the general circulation; these substances might readily cause systemic disturbances either because of their abnormal nature, or, if of the same nature as the products of normal cells, because they are present in abnormally large amounts. Again, the constant disintegration of the cancer tissue through necrosis and subsequent autolytic softening must lead to the entrance of the products of proteid destruction into the blood. But it has not yet been possible to demonstrate that poisonous substances which might cause such a condition as cancer cachexia do arise in either of these ways.

With the foregoing facts in mind, it is interesting to observe the iconoclastic stand taken by Hansemann in his address delivered at Lisbon[1] on the subject of the functions of tumor cells. He recalls the numerous cases of cancer in which there is no cachexia, or in which the cachexia does not appear until shortly before the death of the patient, although the cancer may have existed for years; e. g., the carcinomas of the face which often exist for ten or more years, as well as many instances of uterus or mammary gland carcinoma. After an analysis of many cases, he has come to the conclusion that cancer, *per se*, does not cause cachexia. The anemia and emaciation, he believes, are due to associated conditions, for he found a pronounced cachexia only when the cancer either involved the digestive tract, or was extensively infected and ulcerated, or else when the function of many organs was disturbed by metastatic growths.

Coupled with the consistently negative findings of all those who have recently sought for evidence of a special poison as a cause of cancer, these observations of Hansemann, based on his exceptionally rich experience in tumor biology, must go far to expel the notion that cancers are of themselves a cause of cachexia. In view of the frequency with which "absence of cachexia" is brought forward in weighing the evidence as to the existence or non-existence of cancer in a doubtful case, the relegation of cancer cachexia to its proper place as a result of late changes in the malignant growth will undoubtedly be a step forward in the "early diagnosis of cancer," toward which, as a sort of therapeutic millenium, we all look.

OSTEOPATHIC LEGISLATION.

The attention of secretaries of state boards of health, presidents and secretaries of state societies, members of the committees on medical legislation, and of all our readers who are interested in this subject, is called to the systematic, organized effort which is being made on the part of osteopaths throughout the United States to secure favorable and uniform legislation in every state.

Bills have been or are being introduced in all the states in which the legislatures are now in session which

1. Zeitschr. f. Krebsforschung, 1906, iv, 565.

have not already adopted such laws. These bills are practically identical, not only in provisions, but in several instances in actual verbiage. Profiting by the experience of the medical profession in the matter of state licensure, the framers of this bill (for there really is but a single bill) have provided, not only that all persons practicing osteopathy in the state at the time of the passage of the bill shall be exempt from examination, but also that "to all persons authorized to practice osteopathy in any other state or territory shall be issued a certificate to practice osteopathy on the presentation of a certificate of license issued after examination by a legally constituted board of such state or territory, or, any osteopathic physician who has been in the actual practice of osteopathy for five years, who is a graduate of a reputable school of osteopathy, and who may desire to change his residence to this state shall be licensed without examination." This provision has already been adopted in thirteen states.

In a word, a systematic effort is being made to put through the legislature of every state a bill, establishing a separate board of osteopathic examiners, which board is not only empowered but instructed to issue a license to practice osteopathy without examination to any one who may hold a license in any other state. In a few of the bills introduced some slight modifications have been made, but the main provisions are practically the same. The wording of the sections referred to in the bill which passed the West Virginia Legislature is absolutely identical, word for word, with that of the bill now pending in the Oregon Legislature. This remarkable coincidence may be due to thought transference or unconscious assimilation, but most of our readers will explain it by assuming the existence of a guiding hand and of an organized effort to secure, for these manipulators, rights and privileges which the medical profession has never been able to enjoy. We shall have more to say on this subject, but we voice this warning to all who are interested in safeguarding the health of the people and upholding the standard of education required by those who assume to treat the sick.

LEGISLATION PROBLEMS.

It is often a wonder to the layman that errors creep into laws in spite of the study given to their phraseology by eminent lawyers. But the slips are no more strange than the medical blunders which physicians sometimes pass over. A "patent medicine" law was passed in Massachusetts in 1906, which provided that there should be stated on the wrapper the amount of alcohol in such medicines, if "in excess of the amount shown to be necessary by the U. S. Pharmacopeia or the National Formulary as a solvent or preservative of the active constituents of the drugs contained therein." This highly illuminating provision might be a "joker" introduced into the bill by farsighted "patent medicine" proprietors, because neither the U. S. Pharmacopeia nor the National Formulary contains any statement of the amount of alcohol necessary to dissolve or to preserve the active principles of any drug. The "excess," therefore, is an indeterminate quantity. Moreover, in the case of some nostrums whose active constituent is alcohol itself, the problem resolves itself into a *reductio ad absurdum*. Massachusetts legislators are endeavoring now to amend the law so that it will conform to the national Food and Drug Act.

DR. CARROLL'S PROMOTION.

As will be noted in another column, James Carroll, of the U. S. Army Medical Department, has been recommended, by special Act of Congress, for promotion to the grade of Major. This, as our readers know, is a recognition of his self-sacrificing labor in connection with the experimental work on yellow fever. While a tardy one, this is an act of justice, and Congress has done only what it should have done long ago. It is proof that republics are not always ungrateful. It is not unusual for some heartburning, discontent and charges of unfairness to be engendered when, on account of important services rendered, an officer has been advanced in rank over others who have served long and faithfully. But in the case of Dr. Carroll's preferment it seems that the entire medical corps of the Army, as well as the officers of the other branches of the service, rejoice at the advancement, recognizing as they do his single-mindedness, modesty and ardor in his chosen line of work.

Medical News

ALABAMA.

Medical Society Meeting.—At the annual meeting of the Bullock County Medical Society, held in Union Springs recently, the following officers were elected: President, Dr. James L. Bowman, Union Springs; vice-president, Dr. W. H. Sellers; secretary, Dr. Charles M. Franklin, Union Springs, and treasurer, Dr. Thomas J. Dean, Union Springs.

Personal.—Dr. Clement Ritter, Selma, was thrown from his buggy in a runaway accident, February 25, injuring his back and left knee.——Dr. Frank H. Dennis, who has been ill at the Providence Infirmary, Mobile, for a considerable time, has sufficiently recovered to take a trip to Texas.

ILLINOIS.

Communicable Diseases.—On February 27 Jacksonville had 7 cases of smallpox with 5 foci of infection.——Rockford reports a severe epidemic of influenza.——Scarlet fever at the Girls' Home, Geneva, has apparently taken a new start, 41 cases in all having been reported.

Clinics in Insane Hospitals.—The resolution of Speaker Shurtleff against holding clinics in the state insane hospitals was adopted unanimously by the House Committee on Appropriations February 22. This is said to be a purely political measure directed against the governor, and physicians throughout the state express themselves as indignant that the privilege of instruction which is given at other state institutions, by observation of patients, should be withheld at the hospitals for the insane, where most valuable results might be attained.

Coroner's Report.—During February the coroner of Cook County investigated 341 deaths, 42 less than the preceding month and 77 less than for the corresponding month of 1906. Of the deaths 156 were due to natural causes and 185 to violence. Falls caused 26 deaths; suicide, 25; railroad accidents, 22; burns and scalds, 18; street-car accidents, 16; homicides, 14; explosions and asphyxiations, each 13; alcoholism, 10; criminal operations, 9; poisoning, 3, and exposure, 2. Of the 25 suicides 9 were due to carbolic acid and 7 to gunshot wounds.

Osteopathic and Optometry Bills.—The osteopathic bills, noted in THE JOURNAL of February 9, are still in the committees to which they were referred, viz., House bill No. 66 in

House Committee on Miscellaneous Subjects, and Senate bill No. 21 in the Senate Committee on License and Miscellany. These bills would confer on osteopaths all the privileges of licensed physicians, with the exception that they can not practice major surgery. The following bills have been recently introduced: House bill No. 256, for an act to regulate the practice of optometry—a bill similar in purport to that which was killed in 1905. House bill No. 318, for an act to amend section 1 of State Board of Health act—bill would increase the membership of State Board of Health by two members, "one of whom shall represent the osteopathic school of medicine." House bill No. 319, for an act to amend sections 2 and 3 of the medical practice act—would nullify the provisions of the present medical practice act; would take from the State Board of Health the right to determine the "good standing of medical colleges;" would stipulate the course of instruction in medical colleges, which is to be lengthened if "osteopathic therapeutics" be added to the curriculum; would provide for an examination in medicine and osteopathic therapeutics—the latter only when such subjects are taught in the college; would provide for the licensing, without examination, of graduates of Illinois colleges of medicine or osteopathy; would license to practice, as physicians and surgeons, graduates of osteopathic colleges in Illinois who shall pass an examination in the subjects enumerated in the act. (Two subjects only specifically mentioned in bill, viz., osteopathic therapeutics and comparative medicine), and would permit these osteopaths to "enjoy all the rights and privileges which physicians and surgeons in the state now have." These bills have all been referred to the House Committee on Miscellaneous Subjects. The time limit for the introduction of bills in the House of Representatives expired February 28.

Chicago.

College **Changes Name.**—The American College of Medicine and Surgery, Chicago, has changed its name to the Chicago College of Medicine and Surgery.

February **Mortality.**—During February there were 2,973 deaths, equal to an annual death rate of 18.39 per 1,000. Pneumonia led the death causes with 611 deaths, followed by consumption with 322; heart disease, with 214; nephritis, with 182; violence (including suicide), with 175; scarlet fever, with 142; bronchitis, with 119, and acute intestinal diseases, with 109.

Health **Inspection.**—During the week ended March 2, 7,867 school children were examined. Of this number 1,616, or little more than 20 per cent., were found to be suffering from communicable diseases and were excluded from school attendance. Nearly on-third of the exclusions were on account of diphtheria or tonsillitis and nearly one-tenth on account of scarlet fever.

Personal.—Dr. and Mrs. John B. Murphy left for a trip to California, March 3.——Dr. Arthur D. Bevan, chairman of the Council on Medical Education, is taking a trip along the Pacific Coast, visiting medical colleges.—Dr. and Mrs. Charles P. Small have engaged passage for Naples, sailing June 8.——Dr. P. J. Hoshie Farrell has recovered from his recent serious illness and has resumed practice.

Deaths of the **Week.**—During the week ended March 2, 786 deaths were reported, 19 more than for the previous week and 223 more than for the corresponding week of 1906. The respective annual death rates being 19.45, 17.49 and 14.32 per 1,000. Of the deaths 144 were due to pneumonia; 91 to consumption; 80 to violence (including suicide), and 50 each to Bright's disease and heart disease. Scarlet fever caused 23 deaths; diphtheria, 5; whooping-cough, 7; measles, 12; influenza, 5, and typhoid fever, 9.

KENTUCKY.

Personal.—Dr. W. M. Doores, Crab Orchard, is reported to be critically ill.——Dr. Edward L. Carpenter, Louisville, who has been critically ill with intestinal hemorrhage, is reported convalescent.

Milk **Commission.**—The milk commission of Jefferson County Medical Society, at the last meeting of the society, was empowered to take such steps as might be thought necessary to protect its rights in the certification of milk and to prevent the independent certification of milk not up to the proper requirements.

Attending **Physician Must Sign Certificate.**—The health office has decided to stop the practice of death returns being returned to the department signed by other than attending physicians. Undertakers have been accustomed to ask permission to sign certificates to avoid the trouble of taking them to be filled in and signed by the attending physicians, and as a result much confusion has resulted. One certificate was returned recently signed "neammonia," the physician's name was misspelled, and no initials were given. "Tubulocosis" was another return recently made.

Dairy Industry.—A most important meeting has just been held at Shelbyville by the farmers of Shelby and adjoining counties at which addresses were made by experts to the dairymen of the Shelby County Dairy Association. An agreement was entered into whereby a committee of three, representing the Dairy Association, the State Pure Food Commission and the State Board of Health will visit each dairy in the county and formulate such rules and regulations as to the production of milk as are thought best, and make such recommendations as to barns, herds, etc., as are found to be necessary, and these will be lived up to by the members of the association. It is also agreed that an agreed bill will be presented to the next legislature looking to the suppression of tuberculosis in cattle in Kentucky, recompensing the farmer for stock killed that react to the tuberculin test.

LOUISIANA.

Hospital News.—The Touro Infirmary, which has been remodeled at a cost of $300,000, was formally opened for inspection February 10, and two days later was ready to receive patients.——The Eye, Ear, Nose and Throat Hospital, New Orleans, has received a donation of $1,000 from the estate of Mrs. Christine Maitre.

Personal.—Dr. Joseph Conn, New Orleans, has resigned as physician for the out-door poor at Touro Infirmary, and Dr. Jules Lazard has been appointed in his stead.——Dr. Charles P. Gleoke, Gretna, has been elected coroner of Jefferson Parish, vice Dr. Stephen D. Gustine, Kenner, deceased.——Dr. C. Milo Brady, New Orleans, has returned from a tour of medical inspection on the Honduras coast.——Dr. Luther Longine, Minden, was thrown from a street car in Shreveport, February 12, fracturing two ribs and, in addition, sustaining severe contusions.——Dr. J. W. Reed, New Orleans, sailed from San Francisco, March 8, for Seoul, Corea, to enter the mission field as a medical missionary.

State Medical College.—It is reported that ground will be broken within a very short time for the building for the Medical Department of the Louisiana State University at New Orleans, for which $100,000 is said to be available. The board of supervisors decided on the location of the institution January 26, Shreveport being the only other competing city. It is reported that the new institution will be located near Charity Hospital, and that the following will be members of the faculty: Dr. James M. Batchelor, dean and professor of surgery; Dr. William Kohlmann, professor of gynecology; Dr. Milton A. Schlenker, professor of obstetrics; Dr. A. Dana, professor of anatomy; Dr. D. A. Stafford, professor of therapeutics; Dr. Waldemar T. Richards, associate professor of surgery; Dr. A. DeGrange, professor of physiology; Dr. W. Roussel, professor of dermatology; Dr. Charles N. Chavigny, associate professor of gynecology, and Dr. Amedee B. Granger, professor of *x*-ray and electro-therapeutics.

Society Elections.—At the annual meeting of the Bienville Parish Medical Society, held at Gibbsland, Dr. Shelton I. Colvin, Mount Lebanon, was elected president; Dr. Thaddeus H. Pennington, Arcadia, vice-president, and Dr. Archibald L. Nelson, secretary-treasurer.——The Ascension Parish Medical Society has elected the following officers: President, Dr. William M. McGailliard; vice-president, Dr. Tuite H. Hanson, and secretary-treasurer, Dr. Paul T. Thibodaux, all of Donaldsonville.——The Tangipahoa Parish Medical Society held its annual meeting at Amite City, and elected the following officers: President, Dr. H. G. Morris, Kentwood; vice-president, Dr. Glenn J. Smith, Amite City, and secretary-treasurer, Dr. James L. Lenoir, Amite City.——The St. Tammany Parish Medical Society held its annual meeting in Mandeville and elected Dr. Ruffin B. Paine, Mandeville, president; Dr. Numar M. Hébert, Covington, vice-president, and Dr. Louis J. Heintz, Abita Springs, secretary-treasurer.——The Rapides Parish Medical Society, at its annual election held in Alexandria February 23, elected Dr. Richard O. Simmons, president; Drs. F. V. Gremillion and Richard F. Harrell, vice-presidents, and Dr. G. M. G. Stafford, secretary, all of Alexandria.

MICHIGAN.

Birthday of Medical Department.—The University of Michigan Medical Department, Ann Arbor, celebrated its fifty-seventh anniversary, February 22. Commemorative exercises were held

in Barbour gymnasium, at which the address of the evening was delivered by Dr. George Dock on "The Medical Library."

Irregular Practitioners Found Guilty.—A recorder's county jury in Detroit, on February 24, is reported to have returned a verdict of guilty in the case of Mrs. Ida Biebler, charged with the illegal practice of medicine. A week before Mrs. Eliza Landau is said to have been found guilty of a similar offense. Sentence was deferred.

To Restrict Distribution of Medicine Samples.—The City Council of Saginaw recently enacted an ordinance requiring that no medical samples shall be distributed unless the distributor has been issued a license. The health office will refuse permits on applications which do not contain an analysis of the medicine to be distributed.

Communicable Diseases.—Centerville reports 20 cases of smallpox.——The threatened epidemic of scarlet fever in Holland has been checked by rigid quarantine.——Marshall is suffering from an epidemic of measles. One public school has been closed temporarily.——Measles is reported to be epidemic at Munising and Allegan.——The public schools of Alma have been closed on account of an epidemic of scarlet fever.

Personal.—A fire in the house of Dr. Herbert A. Eades, Bay City, January 28, damaged to the extent of $1,000.——Dr. Benjamin D. King, Muskegon, has sustained a slight stroke of paralysis.——Dr. Albert C. Potter, Detroit, has been appointed surgeon of the Babcock (Mich.) Lumber Company.——Dr. James W. Gauntlett, Traverse City, who a short time ago fell through a sidewalk fracturing his left arm, suffered a severe burn of the thigh, February 22, from carbolic acid.

NEW YORK.

Stony Wold Fund Completed.—It was announced on March 2 that the fund had been completed on which the conditional gifts of $12,500 each from John D. Rockefeller and Anson R. Flower depended. The institution is now entirely free from the $75,000 debt with which it was encumbered.

Convicted of Illegal Practice.—Dr. Eben A. Wood, Syracuse, who is said to have been convicted several years ago of performing a criminal operation, is reported to have been convicted by a jury in the Onondaga County Court, February 14, of illegal practice of medicine, and remanded for sentence.

Sohmer Bill Passed.—Senator Sohmer's bill prohibiting the removal of a patient from one hospital to another in New York City has been passed by the Senate. The bill compels the superintendents of New York city hospitals to admit all patients brought to them, if there is room in the institution and if the patients are not suffering from contagious diseases.

Protest Against Polluted Ice.—The Merchants' Association Committee on pollution has taken steps to prevent the harvesting of ice from the Hudson River near the mouths of the Rondout and Catskill creeks. This locality is regarded as particularly dangerous because of an epidemic of typhoid fever which has been prevalent in Catskill all winter, 20 deaths from that disease having been reported from that village during the winter.

Personal.—Dr. Frederick J. Barrett, Buffalo, has been appointed examining surgeon for the eye, ear and throat for the Buffalo pension bureau.——Dr. Walter G. Frey, Long Island City, has been appointed deputy coroner of Queens County, vice Dr. Benjamin Strong, who is at present in New Mexico on account of ill health.——Dr. Wilfred Grenfell of Labrador lectured in Buffalo, February 26, 27 and 28, under the auspices of the Grenfell Association of America.——Dr. Frank Van Fleet, 60 East Seventy-seventh Street, New York, has been elected a member of the National Legislative Council of the American Medical Association, to represent the state of New York.——Dr. Chester A. Paull of the Loomis Sanatorium at Liberty, N. Y., has been chosen superintendent and physician-in-chief of the new state tuberculosis sanatorium, which will be opened in May at Wales, Waukesha County, Wis.

Legal Idea of Insanity.—Dr. Allan McLane Hamilton, in his lecture at the Academy of Medicine, March 2, on the "Legal Idea of Insanity," summed up his ideas regarding new legislation by making the following recommendations:

1. The Commissioner of Lunacy (to be appointed) should be a registrar and physicians should be compelled to report cases of insanity to him just as they do cases of contagious disease.
2. Though the Commissioner in Lunacy may have power to license private institutions, he should also be empowered to formulate additional requirements which would put some of them on a much higher standard than they occupy at present.
3. Commitments are chiefly to be looked on as re-enforcements by the judge of the persuasion exerted by friends, physician and family of the patient and should be resorted to only when the latter can not be persuaded to go to the asylum.
4. Everything should be done to make the appeals of committed patients available. There should be severe punishment for the suppression of letters or interference in any way with the alleged lunatic's rights.
5. There should be material reform in the attitude of the law regarding capacity and criminal responsibility, insane acts in themselves, in every relation they may have, receiving more weight than heretofore.
6. There should be a departure from conventions in old and arbitrary definitions.
7. Special insane acts should be studied with reference to the crime itself in a way they have not been up to this time.
8. The attitude of the courts should be much more charitable to the medical witness than it is to-day, the intelligent medical man being put in possession of all the facts in the case and not being obliged to answer restricted questions which place him in a false position and which are deficient in the presentation of the facts.
9. In all matters involving the determination of capacity or responsibility the medical man should be required to prepare a brief which should form the basis of his cross-examination, and this, if necessary, must be supported by extraneous evidence which has received the sanction of the court as to heredity, previous history and facts communicated by others.

New York City.

Hospital to be Enlarged.—Plans have been filed for the enlargement of the Misericordia Hospital. A five- and six-story extension is to be added with a frontage of 126 feet and a depth of 54 feet, at a cost of $125,000.

Personal.—Dr. Earl W. Phillips of Bellevue Hospital is in the Willard Parker Hospital with diphtheria.——Dr. Alfred Stevens was recently injured in a street railway collision.——Dr. Henry Herman has been elected adjunct pr fessor of pediatrics in the New York Polyclinic.

Harvey Lecture.—The tenth lecture in the Harvey Society course, at the New York Academy of Medicine, March 9, at 8:30 p. m., by Dr. Friedrich Müller, professor of medicine at the University of Munich, Germany, is on "Neuroses of the Heart." This is the last lecture of the present year's series.

Winter Work of St. John's Guild.—The experiment of this society in extending its work on behalf of convalescent children to the winter season has been successful. Only part of the hospital was equipped for winter work, but the accommodations thus provided have all been taken and there is a waiting list.

For Hospitals.—More than $2,000 was realized from the sale of boxes and seats for a benefit at the Academy of Music, for the enlargement of the Jewish Hospital for Deformities and Joint Diseases.——At a benefit recently given at the Metropolitan Opera House, $5,300 was raised for the Italian Benevolent Society, which is to be used for an Italian Hospital.

Mortuary Statistics for 1906.—The total number of deaths during the year, of children two years and younger, was 6,689, and the total number of deaths of children under five years of age, 25,777. Deaths from typhoid fever of all ages was numbered 639; from scarlet fever, 491; from diphtheria and croup, 1,898; tuberculosis of the lungs, 8,955; tubercular meningitis, 765; other forms of tuberculosis, 474; smallpox, 6; measles, 1,145. The report shows that the death rate from all causes in the city was 18.35 per 1,000.

Hospital Tipping System.—The Kings County grand jury for February has adopted resolutions calling on the March jury to investigate conditions in the Brooklyn Hospital, where it is alleged that there is an elaborate system of tipping among the orderlies which causes great suffering to patients unable to pay. Dr. Hanneman, the superintendent of the hospital, said that it is the custom in nearly every hospital for patients to give fees to the orderlies, but denied that there was any organized system of graft or that any patient had suffered from neglect.

Health Report.—There were reported to the sanitary bureau for the week ended February 23, 360 cases of tuberculosis, with 220 deaths; 277 cases of diphtheria, with 46 deaths; 298 cases of scarlet fever, with 13 deaths; 259 cases of measles, with 10 deaths; 66 cases of whooping cough, with 5 deaths; 45 cases of typhoid fever, with 12 deaths; 13 cases of cerebrospinal meningitis, with 12 deaths; 76 cases of varicella and 1 of smallpox, making in all 1,395 cases, with 319 deaths.——During the week there were 1,671 deaths, as against 1,656 deaths for the corresponding week of last year. Of these deaths, 456 were of children under five years of age. There were 1,395 cases of contagion reported, as against 1,349 for the same week of last year. The increase is due chiefly to scarlet fever.

Provision Made for Two Milk Stations.—The milk committee of the New York Association for Improving the Condition of the Poor has almost completed plans for the establishment of two large stations for the pasteurization of milk and the

sterilization of nursing bottles and nipples. There will be a number of auxiliary branches from which milk will be distributed to those who wish it. Twenty doctors will be employed for consultation and 100 nurses will have charge of the various distributing stations, and will be on call for special service at any time. The committee does not intend to compete with the Strauss stations, but to supplement that work. It is believed that about 20,000 children will be reached in this way. At stated intervals the doctors will deliver public lectures on hygiene in the home, and the nurses will go among the consumers to give advice and assistance to the mothers. The health department, pending the increase of the number of milk inspectors, has instituted a system of following up inspection, by a series of letters, to assure the dealer or dairyman that he has not been forgotten by the department.

Still **Agitating the Milk Question.**—Eight states supply milk to New York City, and it is stated that the Health Department will endeavor to get the coöperation of the proper authorities in each as regards the safeguarding of the supply. While the department is not ready to give its plans in detail, it is understood that it will come out strongly for better inspection and that $250,000 will be asked for this purpose. A conference of officials representing the leading interests of this country regarding tuberculosis in cows is one of the possibilities of the near future. The milk committee of the Society for the Improvement of the Condition of the Poor has decided to oppose the Pasteurization of the entire milk supply. At a meeting of the New York Milk Committee special emphasis was laid on the importance of Pasteurizing the milk for infants, and it was urged that depots for this purpose be established before June. A committee was appointed to seek the coöperation of the State Board of Health and of the Department of Agriculture in relation to the destruction of tuberculous cattle, and to incite greater activity in local health boards in reference to reporting cases of communicable diseases in persons on farms or who handle milk.

PENNSYLVANIA.

Dixon **Again Confirmed.**—The nomination of Dr. Samuel G. Dixon, Ardmore, to be state commissioner of health, was sent to the senate by Governor Stuart and confirmed, to take effect March 1. Dr. Dixon was originally appointed to this office, the salary of which is $10,000 a year, by Governor Pennypacker, soon after the creation of the Department of Health by the legislature of 1905.

Hospital Vacancies.—Two vacancies will occur July 1 in Hamot Hospital, Erie. The hospital has 80 beds and more than 1,000 patients were admitted last year. The term of service is one year, six months as medical and six months as surgical interne. Appointments are made without examination. Further information may be had from Dr. Charles G. Strickland, secretary of the medical board, Erie.

Against Vivisection.—Representative Townsend of Philadelphia has introduced a bill in the legislature providing that it shall be unlawful for any person to vivisect or experiment on any living creature whatever, it matters not whether or not the experimentation shall be done in scientific research. The penalty is to be a fine of from $100 to $500 and imprisonment for from one to six months, either or both.

Philadelphia.

Betterment of Water Supply.—Major Gillette, chief of the bureau of filtration, has recently inspected the filtration plants at Belmont and at Torresdale. At Belmont particular attention was paid to the location of the preliminary filters, for which a contract was recently awarded. These preliminary filters will increase the yield from the Belmont beds from 30,000,000 to 60,000,000 gallons. It is said that by April 1 the northeastern section of the city will receive filtered water.

Bequests.—By the will of Benjamin F. Butler, an estate valued at $15,000, is divided between the Presbyterian Orphanage and the Presbyterian Hospital.——According to the will of William Miller, $100 is left to St. Timothy's Memorial Hospital.——By the will of the late Emily D. Wagner $5,000 is bequeathed to St. Timothy's Hospital, Roxborough.

Donation Day.—The Philadelphia Lying-in Charity and Nurse School held its donation day March 2. The hospital was open all day for inspection by visitors. Donations of money, food, clothing and medical supplies were received. During the past year the hospital has cared for more than 1,200 destitute women.

Do **Not Support Hospitals.**—The senate appropriations committee has completed its investigation of the Philadelphia hospitals. Members of the committee condemn the indifference of the city to their support, and special criticism was made of the failure of large industrial establishments to give financial support to the hospitals to which their injured employés are taken.

Alumni Information Wanted.—A committee of the alumni of all departments of the University of Pennsylvania is preparing a catalogue of all graduates and non-graduate matriculates of the university. Special information is wanted of graduates of the class of 1809 of the medical school. The information should be sent to the editor of the alumni catalogue committee, University of Pennsylvania.

GENERAL.

American Physio-Therapeutic Association.—This newly organized medical body, starting with a membership of over 100, will give its attention to all drugless (physical, mechanical, psychic) therapeutic and diagnostic methods. The officers are as follows: President, Dr. H. H. Roberts, Lexington, Ky.; secretary, Dr. Otto Juettner, Cincinnati; treasurer, Dr. George H. Brant, Richmond, Ind.

Carroll's Merited Promotion.—A special act of Congress, February 27, authorized the President to appoint Lieutenant and Assistant Surgeon James Carroll, U. S. Army, a surgeon with the rank of major. The President at once approved this bill and sent in Major Carroll's nomination to the Senate, and it was confirmed promptly, so that Dr. Carroll is now a major in the Medical Department of the Army. James Carroll was born in England June 5, 1854. At the age of 15 he migrated to Canada and later came to this country, where he first enlisted in the Army Jan. 9, 1874. He was promoted corporal May 1, 1874, and sergeant Jan. 1, 1875. He served continuously in the line of the Army until appointed hospital steward Sept. 15, 1883. While still a soldier, he began the study of medicine at the University of New York City, during the session of 1886-1887. After the break of a year he resumed his medical studies in Baltimore at the University of Maryland, in 1889-1891, and received his degree from that institution. During the winters of 1891-1892 and 1892-1893 he undertook graduate work in pathology and bacteriology at the Johns Hopkins Hospital. His first association with Dr. Walter Reed was in 1893, when he was assigned to duty at the Army Medical School in Washington, and they continued to be more or less connected during the next six years. His service was continuous as hospital steward until he was appointed contract surgeon May 22, 1898, and assigned to duty in the laboratory of the Surgeon-General's Office. Detailed as a member of the Army board for the study of Infectious diseases in the Island of Cuba, in association with Major Walter Reed and Acting Assistant Surgeons Aristides Agramonte and Jesse W. Lazear, in the course of their experiments, he voluntarily submitted to the bite of an infected mosquito Aug. 27, 1900, and was taken sick with yellow fever Aug. 31, 1900, suffering a severe attack. His was the first case of experimental yellow fever. He was confined strictly to bed until September 13, and convalescence being slow, he left Cuba Oct. 9, 1900, on sick leave, returning for duty Nov. 11, 1900. He took part in all the experimental work of the board, made nearly all the experimental inoculations, and had charge of the infected mosquitoes until March 4, 1901, one month after the departure of Major Reed. At this time he had been recommended for appointment to a volunteer majority by General Leonard Wood and Surgeon-General Sternberg, but Secretary Root decided that no more appointments would be made. After returning from Cuba his time was devoted to the study of mosquitoes that had been infected and preserved for the purpose. In August he again proceeded to Cuba, under orders, alone, for the purpose of performing additional experimental work, in which he produced six more experimental cases of yellow fever, all of which ended in recovery. In 1903 he showed by experimental demonstration that the supposed protozoön parasites reported to have been found in yellow-fever infected mosquitoes were ordinary yeast cells. He was assigned by General Sternberg in 1897 to the work of studying the supposed cause of yellow fever, in association with Major Reed, and in this work it was shown that the supposed cause of yellow fever described by Professor Sanarelli was closely related to the hog-cholera bacillus. In 1898 he was sent to Camp Alger to study the blood of the fever patients, and he was the first to show and reported to General Sternberg that the prevailing illness among the troops was typhoid fever and not malarial fever. He was then ordered to Camp Cuba Libre, Jacksonville, Fla., for similar work, and his results were included in the report of the typhoid-fever board. He was subsequently ordered to Camp

George H. Thomas, Chickamauga Park, to obtain samples of the waters in use and to examine them bacteriologically. His service as contract surgeon continued until Oct. 27, 1902, when he was appointed first lieutenant and assistant surgeon in the Medical Department, the age limit having been waived to permit him to appear for examination. He was then assigned to duty as assistant curator of the Army Medical Museum, and as professor of bacteriology and clinical microscopy at the Army Medical School, having previously served as assistant during every session of the school. He was appointed curator of the Army Medical Museum by an order of the Surgeon-General, dated July 3, 1903. He has performed the above duties continuously since his appointment and completed thirty-three years' continuous service in the Army on Jan. 21, 1907. He assisted Major Reed in the department of bacteriology and pathology of the Columbian (now George Washington) University from the session of 1895-96 until the death of Major Reed, whom he has now succeeded as professor of those subjects, which he teaches to evening classes.

CANADA.

To Make Tuberculosis a Reportable Disease.—A large delegation, representing the fraternal organizations doing business in Canada, waited on the Ontario government recently, asking that consumption be made a notifiable disease in the province.

Toronto's Water Supply.—Dr. J. A. Amyot, provincial bacteriologist of Ontario, recommends for Toronto a filtering basin on Scarboro Heights, six miles east of the city, at a cost of $1,000,000. He opposes a trunk sewer, which would probably cost $6,000,000 and would not then insure pure water for the city.

Student Deaths.—Mr. J. A. Macdonald, Peterboro, Ont., a first-year student in medicine at Toronto University, died in Toronto, February 28, of typhoid fever.——Mr. Smith Henderson, son of Dr. Henderson of Ottawa, and a senior student in medicine at McGill University, died in Montreal of appendicitis, aged 22.

Registration Case in Alberta.—The case of Lafferty, the registrar of the College of Physicians and Surgeons of Alberta, versus Lincoln, a physician who was convicted of practicing in Alberta without a license, will be appealed from the Supreme Court to the full court, as the question of the constitutionality of the Alberta medical act has been raised.

"Patent-Medicine" Legislation.—A bill respecting proprietary medicines has been introduced in the Dominion House of Commons by Minister Templeman from British Columbia. It provides for the sending of samples from time to time to the special department for analysis, for an affidavit of contents and for the elimination of poisonous drugs from mixtures. Under its provisions a license will be issued to all manufacturers who comply with the provisions of the act.

Annual Report of the Inspector of Hospitals of Ontario.—This report states that in Ontario there are 61 hospitals, 37 refuges and 30 orphanages, 3 homes for incurables, 2 convalescent homes, 2 Magdalene asylums and 25 county houses of refuge receiving governmental aid. The total number of patients under treatment in these hospitals during 1906 was 41,950; and the total expenditure in connection therewith was $1,228,289. The Ontario governmental grant toward these was $110,000.

Annual Report of the Toronto General Hospital.—This report for the year ended Sept. 30, 1906, shows that on Oct. 1, 1905, there were 315 patients in the institution, and on Sept. 30, 1906, there were 279. The total number admitted during the year was 3,583 and the number of births was 197. The average length of stay of each patient was 27.19 days. The cost *per capita per diem* for maintenance was $1.33. In the main theater in the hospital 905 operations were performed; in the pavilion, 239; in the eye and ear and nose and throat departments, 162.

Personal.—Dr. T. G. Roddick, dean of the Medical Faculty of McGill University, Montreal, will relinquish that office next year, after being connected with McGill for forty years.——Dr. Howard T. Barnes has been appointed professor of physics in McGill University.——Drs. Bell and Watts of the Ontario Board of Health are inspecting the lumber and mining camps in northern Ontario.——Dr. Wilfred T. Grenfell delivered a lecture in Toronto, March 8 on "The Fisherfolk of Labrador."——Dr. B. J. McConnell, Morden, Man., will run for the Manitoba legislature in the coming elections, in the interest of the liberal party.——President Eliot of Harvard University has been the guest of the American university men in Montreal at their annual banquet. The subject of his address was "The University —Its Aims, Aspirations and Work."

To Form Toronto Academy of Medicine.—It is almost settled that the Ontario Medical Library Association, the Toronto Clinical Society, the Toronto Medical Society and the Toronto Pathological Society will merge into the Academy of Medicine, Toronto. The academy will be managed by a council of 12, and the first council will be composed of the officials of the Ontario Library Association and the presidents and secretaries of the other three societies. These will choose their own officers, while succeeding councils will be composed of nineteen members. The academy has a handsome residence of 15 rooms in Queen's Park, and a library and auditorium to cost $50,000 will be added. Dr. J. F. W. Ross is president of the Ontario Medical Library Association; Dr. H. B. Anderson, of the Toronto Clinical Society; Dr. R. D. Rudolf, of the Toronto Medical Society, and Dr. J. A. Amyot, of the Toronto Pathological Society.

Hospital News.—The Grace Dart Home for Destitute Incurables has just been opened in Montreal.——At the recent annual meeting of the Board of Governors of Notre Dame Hospital, Montreal, it was announced that $500,000 is still required for the new hospital. Dr. L. de L. Harwood read the annual medical report, which stated that during the past year 3,255 patients were treated, 1,864 being men and 1,391 women. The percentage of deaths was 7.89.——In St. Paul's Hospital, for contagious diseases, Montreal, 200 cases of diphtheria, 67 scarlatina, 196 measles and 17 doubtful cases were treated last year. The death rate was 4.5.——The Western Hospital, Grace Hospital and St. Michael's Hospital, Toronto, are seeking a joint grant of $200,000 from Toronto City Council.——During the year 1906, 3,444 patients were treated in the Royal Victoria Hospital, Montreal, an increase of 351 over 1905. There were 1,970 Protestants, 1,148 Roman Catholics, 279 Hebrews and 47 other faiths. The free patients numbered 1,989, the public ward patients 1,021, and private ward patients 434. In the out-patient departments the total number of patients treated was 4,229. The income for the year was $160,436.09, while the ordinary expenditure was $130,353.30, the balance being applied to indebtedness incurred by new buildings. Resolutions of appreciation and regret were adopted at the annual meeting just held, on the death of Dr. James Stewart, the senior physician. The appointments of Drs. W. F. Hamilton and Charles F. Martin as physicians were confirmed by the management. Dr. Francis J. Shepherd was appointed consulting surgeon to the hospital.

FOREIGN.

Women Medical Students at the German Universities.—Seven German universities admit women on the same terms as men, and at present they have a total register of 116 women in the medical departments. This is an increase of 56 over the preceding year.

Sixth International Tuberculosis Conference.—The route of infection in tuberculosis is to be the principal theme discussed at the next international conference on the subject of tuberculosis, which is to convene at Vienna, September 19-21. Active preparations have been under way for some time to render the discussions exceptionally profitable.

Compulsory Day of Rest in France.—Recent legislation in France has made rest on one day of the week compulsory for employés. It is left to the proprietor of the establishment to plan the day of rest so that each of his employés can have one day free out of every seven. The chief of the public hospital and organized charities service, the *Assistance publique*, has asked for increased appropriations, as he will have to add several hundred more persons to his staff of attendants, nurses, etc., in order to provide for the day of rest in the week.

German Congress for Internal Medicine.—The twenty-fourth congress for internal medicine will be held at Wiesbaden, April 15-18, 1907, with von Leyden in the chair. The only subject appointed for discussion is "Neuralgias and Their Treatment," but communications have already been announced from Jaksch of Prague, on "Chronic Manganese Toxicoses;" Treupel on "Percussion of the Heart;" Hirsch and Spalteholz on the "Coronary Circulation," and Müller and Jochmann on a new method to determine the proteolytic action of ferments. This method is proving a valuable means to differentiate tuberculous processes by the ferments in the pus.

Increase in Fees in Europe.—The increased cost of living is causing physicians at many points to raise fees. The medical societies have established minimal rates in Vienna, Greater Berlin, Leipsic, and elsewhere. In Leipsic the medical society decided to enforce the increased rates for all accounts left over

from 1906. The medical assistants in the hospitals in Dresden and Berlin also presented a petition to the authorities asking for increased remuneration. This was granted them in Dresden, but denied them in Berlin. We learn from our exchanges that all the petitioners and all the volunteer physicians in the Berlin hospitals at once joined the *Leipziger Verband*.

The Next International Congress of Gynecology.—As will be remembered, the Fifth International Gynecologic Congress was to have been held at St. Petersburg last year, but was postponed. The Russian gynecologists who had the matter in charge have now surrendered their powers to the permanent general secretary of the International Gynecologic Association, which was founded in 1893, with its central office in Brussels. The organization of the next congress is, therefore, left entirely in the hands of Dr. Jacobs, the general secretary, and he is now taking steps to organize it in due form. He has at his disposal the funds accruing from membership dues, etc., which are always given to the committee organizing the congress at the time.

Medical Information Bureau at Berlin.—The Kaiserin Friedrich-Haus at Berlin, which is the center for official postgraduate instruction throughout the German empire, has had installed an information bureau for the convenience of local and visiting physicians. Particulars can there be learned in regard to courses, hospitals, medical collections, special operations, lectures and the like. The visiting physician can there learn whatever he needs to obtain the greatest benefit from his stay in Berlin. The official title of the information bureau is the Auskunftei, Kaiserin Friedrich-Haus, Luisenplatz 2-4, Berlin NW. 6, Germany. No charge is made for the services. THE JOURNAL has several times referred to the similar scientific information bureau at Paris, in charge of Dr. R. Blondel, à la Sorbonne, Paris, the first of the kind organized, which has been in successful operation for several years.

Annual Meeting of the German "Leipziger Verband."—This organization to promote the economic interests of the profession has continued a progressively successful course since its foundation only a few years ago. The number of cases in which it has had to interfere to protect physicians in conflict with the sickness insurance societies has constantly declined, being only 92 during 1906. Its efforts were crowned with success in the overwhelming majority of cases, although it still publishes in our exchanges a long list of towns where physicians are warned not to accept the contract positions offered without conferring with the *Leipziger Verband*. A number of the towns on the list have been there from the very first organization of the association, old embittered feelings probably interfering with the settlement of the trouble. As a rule, now, when a conflict threatens all trouble is averted by the prompt intermediation of the *Verband*. It has also secured equitable and uniform rates and conditions for ship doctors. Another phase of its activity has been its free employment and exchange bureau by which physicians have been more evenly distributed over the country. The *Verband* has also inaugurated series of postgraduate lectures on exclusively economic and ethical questions, which have been highly appreciated.

LONDON LETTER.

(From Our Regular Correspondent.)

LONDON, Feb. 23, 1907.

Reduction of Infant Mortality Without Municipal Milk Depots.

At a meeting of the Incorporated Society of Medical Officers of Health of Great Britain held on February 8, it was generally agreed that municipal milk depots are subsidiary means of reducing infantile mortality. In the industrial towns of the north of England, one of the principal causes of infantile mortality is the working of married women, and it was stated that so long as a woman can earn more money than her husband this is likely to continue. Bad business, drunkenness among the lower classes, ignorance of the first principles of health and adherence to tradition are other potent factors. To ensure that every child not breast-fed should have a supply of clean unadulterated milk would, said one speaker, go a long way toward lowering the death rate among infants from diarrhea.

Antivaccination Legislation.

It is expected that the accession of a liberal government will be followed by enactment of legislation favorable to the spread of smallpox. Compulsory vaccination was abolished in 1898, but people who objected to having their children vaccinated were compelled to go before a magistrate and satisfy him that they had conscientious objection to it. The antivaccinationists nearly all belong to the liberal party, and at the last elections succeeded in getting pledges from a number of members of parliament to support some alteration of the law in their favor. In the address in answer to the King's speech, Sir William Collins—an ophthalmologist and one of the few prominent members of the medical profession opposed to scientific prophylaxis—urged the substitution of isolation and disinfection. In replying, the government undertook to substitute for the present system a new one by which it would be unnecessary for a "conscientious objector" (sic) to go before a magistrate and allowing such individuals to secure exemption by making a statutory declaration. This satisfied the antivaccinationists.

The Pollution of the Thames.

Dr. Herbert Williams, health officer of the port of London, has made a comprehensive examination of the water of the Thames. Though an enormous amount of sewage is discharged into the river, amounting to 200,000,000 gallons daily at Barking and Crossness (only one of several sources of pollution), the general condition of the water in the Thames estuary, he finds, is not in a state of serious pollution. The shellfish layings within the jurisdiction of the port sanitary authority are few and comparatively unimportant. Samples of water taken one mile below the sewer outfalls of Southend and Sheerness respectively show no evidence of gross pollution. This is mainly due to the large dilution with sea water. However, several outbreaks of typhoid fever due to shellfish taken from the estuary of the Thames have been reported in THE JOURNAL from time to time.

Amalgamation of London Medical Societies.

The amalgamation of the medical societies of London has at last been effected, under the name of the "Royal Society of Medicine." The names "Royal Academy of Medicine" and "Imperial Academy of Medicine" were rejected.

Infant Mortality in London During 1906.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births in London last year, was equal to 130 per 1,000, against 130, 144 and 129 in the three preceding years.

Mortality in London During 1906.

During 1906, 71,155 deaths of persons belonging to London were registered, equal to a rate of 15.1 per 1,000, against 15.2, 16.1 and 15.1 per 1,000 in the three preceding years, the average rate for the ten years—1896-1905—being 17.3 per 1,000. In 1906 there were 4,424 fatal cases of diarrhea, more than 1,000 in excess of the average number. The aggregate mortality from the principal infectious diseases was very slightly below the average for the four preceding years.

Epidemic of Cerebrospinal Meningitis in Great Britain.

Cerebrospinal meningitis shows no signs of abating in certain parts of Great Britain. Twelve cases and 6 deaths have been reported in England; in Scotland, 313 cases, 185 deaths; in Ireland, 122 cases, 66 deaths. The British Local Government Board has issued a circular warning all local sanitary authorities to be on the alert to detect the presence of the disease or to satisfy themselves as to its absence.

DUBLIN LETTER.

(From an Occasional Correspondent.)

DUBLIN, Feb. 20, 1907.

The University Question.

The past few months have been some of the most exciting within our memory for Irish medical men. Changes, political, social and educational, are in the air, and in many of them our profession is closely concerned. Two commissions—one royal and one vice-regal—have recently reported on matters of much interest. Of these, by far the more important is the question of university education in Ireland. For many years the Roman Catholics of Ireland have been discontented with the provision made for them in the matter of university education. They claimed that of the two universities in the country, one—that of Dublin, identical in constitution with Trinity College—is prevailingly Protestant in character, while the other, the Royal University, being a mere examining body, is insufficient to supply a thorough higher education. With a view of settling the question, and also of inquiring into the domestic affairs of Trinity College, the government last June appointed a royal commission, consisting of nine members. These gentlemen examined an enormous number of witnesses and documents, and reported a month ago with commendable promptitude. They are unanimous in recommending certain

reforms in Trinity College, which would render it more efficient, while at the same time they are unanimous in recording a high opinion of the position and reputation of Trinity College. On the point, however, of providing university education for Roman Catholics, there was little agreement. Four commissioners suggested the establishment of a new college suitable for Roman Catholics affiliated with Trinity College in a reconstituted University of Dublin. One, while agreeing with this plan in theory, regarded it as impracticable at present. Three suggested a new college with no relation to Trinity College, but as an integral part of a reconstituted Royal University. The remaining commissioner regarded the demand for a new college as unreasonable.

Before the public had time to digest this strange report, and before the evidence on which it was based had reached them, on the very eve of his departure for the United States, Mr. Bryce, as his last official act in Ireland, announced the intentions of the government. The Royal University was to be abolished, Dublin University was to be reconstituted and to have as its constituent colleges Trinity College, the Queen's Colleges in Belfast and Cork, and a new college in Dublin. The Queen's College in Galway was to be an affiliated college, but not represented on the governing body.

Cerebrospinal Meningitis.

A few cases of cerebrospinal meningitis have occurred in Dublin, more than half of them being fatal. If lack of sanitary administration has anything to do with the spread of the disease, then Dublin may expect a severe outbreak. For the past few months, even in the marked absence of any epizoötic disease, the death rate of Dublin has been among the three or four highest in Europe. In Belfast there have been within a few weeks over eighty cases, of which more than half have ended fatally. Thie disease is therefore of exceedingly virulent type.

VIENNA LETTER.

(*From Our Regular Correspondent.*)

VIENNA, Feb. 15, 1907.

The New Clinics.

The new clinics, which are destined to offer modern equipment for the scientific treatment of diseases, are almost completed. At first only the two gynecologic clinics will be opened. They are built on the pavilion system. Each clinic is erected in the shape of a T, and comprises the ward, operating theaters (one large one, one small one for each clinic), the outpatient department, the lecture hall, a chemical and experimental laboratory and a number of rooms for students. The medical curriculum in force since 1905 requires every student of gynecology to be attached to the clinic for at least two terms of 14 days each, and to assist in the work under the supervision of the assistants. The clinics are three-story buildings, with elevators, low-pressure steam heating, and every equipment for the comfort of the patients. Two medical clinics are contemplated instead of the three existing at present. The third clinic was erected for Professor von Schrötter *ad personam*. As he now retires on account of reaching the age limit (70 years) his clinic will be discontinued. Von Noorden, an authority on the diseases of metabolism, lays special stress on chemistry at the bedside, and a special feature of his clinic will be the dietetic kitchen. This kitchen will provide the necessary diet for patients who require specially prepared food (diabetics, epileptics, arteriosclerotics). In the wards only such patients will be treated as can be utilized for clinical instruction. The others (the so-called uninteresting cases) will be treated in another hospital, which is also in course of erection, and which will contain 1,600 beds, as many as the new clinical hospital. The expense of the new buildings and their equipment will be obtained partly by the sale of the grounds on which the present general hospital stands, and which are valued at $2,000,000.

Results of the Antimalarial Campaign in Austria.

The southern part of Austria from the time of the Romans has been a veritable breeding place for the anopheles, and malaria has been rife. Vigorous action has been taken during the last three years for the extermination of mosquitoes. The methods employed were burning of underbrush and draining of extensive swamps and marshes near the seacoast in Istria and Dalmatia. Hot steam was used to destroy the mosquitoes in places where fire could not be used—in fishing huts and boats. Fifty thousand dollars was devoted to this purpose by the centralized organization so that it was possible to do methodical work, and the naval authorities of the port of Pola assisted by material advice and experience, so that the results obtained are highly satisfactory.

Book Notices

A HISTORY OF CHEMISTRY. From Earliest Times to the Present Day. Being also an Introduction to the Study of the Science. By E. von Meyer, Ph.D., Professor of Chemistry in the Technical High School, Dresden. Translated with the Author's Sanction by G. McGowan, Ph.D. Third English Edition, etc. Cloth. Pp. 691. Price, $4.25 net. New York: The MacMillan Company, 1906.

The best index of the general standing of this work is the fact that we have before us the third English edition. The first was issued in 1891, the second in 1898, and now comes the third. In each case the English edition has followed closely the original German, and all the English translations have been made by George McGowan. The reception by the chemical world of this history of chemistry has consequently been so friendly as to indicate at once that Professor von Meyer's work bids fair to be a classic in its field. Any special words of commendation on the part of the reviewer are consequently wholly superfluous. With a view of indicating more especially to physicians the general scope of the book a brief, general statement of its contents and the manner in which they are presented may be attempted.

The avowed purpose of the work is to describe within reasonable compass the development of chemical knowledge and especially the general doctrines of chemistry from their earliest beginnings to the present time. The growth of particular branches of the science and of industrial chemistry is also detailed more or less minutely. The essential biographical facts concerning the pioneers and leaders in chemical investigation and teaching are given in connection with brief, but interesting characterizations of their personalities, while the part taken by each in the promotion of chemical knowledge and theory is made the subject of discriminating discussion in the proper place. For the purpose of clear, connected presentation the history of chemistry is divided into several distinct periods and the events within each period considered in natural (principally chronologic) sequence. The earliest period and the longest is the Alchemistie which extends practically from the inception of chemical knowledge to the first half of the sixteenth century. This period was dominated by the fixed belief or dogma that one so-called element could be transformed into another and throughout this period the historian finds but little else to record than the continual striving to transmute the base metals into the noble, to create gold and silver. Thus Suida in the eleventh century defines chemistry as the artificial production of gold and silver. Practically contemporaneously with the Reformation, chemistry began a new development mainly through the efforts of Paracelsus and his followers who reduced health and disease to chemical processes pure and simple and maintained that chemical means only were able to restore health. Paracelsus boldly announced that the object of chemistry is not to make gold but to prepare medicines. This is the period of Iatro—or medical chemistry; it is marked by the mutual interaction of medicine and chemistry and the author emphasizes the fact that while mutual enrichment resulted and new paths were opened to both medicine and chemistry the latter in reality profited the more because it became transferred into the hands of men with scientific culture. The great part that Paracelsus took in this new development is more clear and the fact is again emphasized that the recent studies of Paracelsus tend to enhance the appreciation of the real service that he rendered.

The history of chemistry as an independent branch of natural science, following the paths of exact research without immediate regard to practical ends, begins in the middle of the seventeenth century. Robert Boyle was the pioneer. He proclaimed the object of chemistry to be the acquisition of knowledge of the composition of substances. The latter part of the seventeenth and the whole of the eighteenth century were signalized by continuous investigation of the problems of combustion, and inasmuch as these investigations were guided by the conception that the hypothetical fire stuff, phlogiston, was the universal principle of combustibility, this period is set apart as the Phlogistic Period. With the fall of the phlogistic theory, largely through the work of Lavoisier, begins the present chemical era, the guiding star of

which has been and still is the atomic theory, hence the present is the Period of the Chemical Atomic Theory. The dependence of chemistry on pharmacy and medicine—at one time pharmacy was the only road to the study of pure chemistry—ceased, and chemistry became an indispensable aid to practically the whole range of natural science. The history of the birth and development of the atomic theory and of organic chemistry is traced in an interesting manner and with considerable minuteness. In the latter half of the work is given the special history of the various branches of modern chemistry, outgrowths of an ever increasing specialization.

To physicians this work recommends itself strongly for various reasons. First of all is the great value of genuine historical study for the understanding of general chemistry, the increasing and fundamental importance of which to medicine is evident to all. And then the historical relations between medicine and chemistry seem to make the history of chemistry attractive on medico-historical grounds as well. Many of the brightest pages in the history of chemistry are written by physicians: Paracelsus, Van Helmont, Stahl, Black, Berzelius—"the brilliant model for ages to come"—and others. Finally von Meyer's work recommends itself because of its style and form; taking it all in all, it is a book of rare educational value.

PHYSICAL CHEMISTRY in the Service of Medicine. Seven addresses. By W. Pauli. Authorized translation by M. H. Fischer. First edition. Cloth. Pp. 156. Price, $1.25 net. New York: John Wiley & Sons, 1907.

It is a pleasure to observe that publishers find encouragement to put books of this character on the market with ever increasing frequency, for it indicates a healthy growth in the number of physicians who are endeavoring to keep abreast of the progress of the sciences fundamental to medicine. Fischer has translated a collection of seven lectures by Pauli, each of which represents a general summary of the relation of recent studies in physical chemistry to various aspects of biology and medicine. They make no pretense to a systematic consideration of physical chemistry, or even of the relation of physical chemistry to the problems selected for discussion, but rather select certain features which are of interest because of the definite progress recently made or because of special application to medical problems. Consequently the reader needs at least an elementary knowledge of the principles of physical chemistry in order to follow the author intelligently, although most of the elementary principles are brought out at one place or another in the book. One is impressed with the idea that Pauli's lectures have their greatest value as supplementary reading to such a work as Cohen's "Physical Chemistry for Physicians," which the same translator rendered into English a few years ago. This smaller, more recent book generalizes the principles elucidated by Cohen, and brings the subject of the relation of physical chemistry to medicine well up to date. The physician will find particularly interesting and suggestive material in the lectures on the therapeutic studies on ions, and on the relation between physico-chemical properties and medicinal effects. The translator has succeeded unusually well in transforming the shades of meaning, so delicately carried in the German original, into idiomatic English; the work being free from the abnormal construction so commonly seen in translations from the German.

SAUNDERS' POCKET MEDICAL FORMULARY, with an Appendix, Containing Posological Table: Formulas and Doses for Hypodermic Medication; Poisons and their Antidotes; etc. By W. M. Powell, M.D. Eighth edition, thoroughly revised, enlarged and adapted to the eighth revision (1905) of the U. S. Pharmacopeia. Flexible Morocco. Pp. 299. Price, $1.75 net. Philadelphia: W. B. Saunders Company, 1906.

This new edition of a standard work introduces in its prescriptions the more important of the recently discovered drugs. The revision in accordance with the new Pharmacopeia, the blank interleaves for additional formulæ, the variety of emergency information, the convenient pocket-book form, and the numerous prescriptions signed with the names of prominent practitioners will gain new friends for this valued *vade mecum.*

PARAFFIN IN SURGERY. A Critical and Clinical Study. By W. H. Luckett, B.S., M.D., Attending Surgeon, Harlem Hospital, and Frank I. Horn, M.D., Assistant Surgeon Mt. Sinai Hospital Dispensary, New York City. With thirty-eight illustrations. Cloth. Pp. 118. Price, $2.00. New York: Surgery Publishing Company, 1907.

The indications and contraindications for the use of paraffin in surgery are discussed in detail. The literature on the subject has been drawn on and supplemented by the clinical and experimental experiences of the authors. The application of paraffin injections in the treatment of hernia and their value for cosmetic purposes in saddle-nose deformity are shown by means of illustrated case reports.

Correspondence

A Migratory Shingle Nail.

OGDEN, UTAH, Feb. 25, 1907.

To the Editor:—I have followed with interest the recent symposium in THE JOURNAL relating to the migrating needle, and now that about every one who cares to has told his story, I venture to obtrude with one that is authentic. A few years ago I was attending a convalescing patient for whom I ordered chicken broth. During the preparation of the chicken it was discovered that the liver, normal in every other way, was transfixed by a common nail some two or three inches long, usually called a shingle nail. It was not a modern wire nail, but one of the old-fashioned cut affairs. The nail was situated about the anatomical center of the liver and protruded equally on each side of that organ. The indications seemed to be that the nail had been in place a long time. The nail was of a bright iron color, as if it had just been made, perfectly fitted the clean-cut mortise and was surrounded, even with the surface of the liver, by a rectangular collar, which was hyaloid in character, bluishly translucent and very hard. It was indeed a curiosity, and after it was shown for some time to the local fraternity and others, I sent it to the Smithsonian Institution, where it still remains.

A. S. CONDON, M.D.

"Alcohol in Official Preparations."

ST. LOUIS, Feb. 24, 1907.

To the Editor:—A letter in THE JOURNAL, February 9, page 535, by Dr. George Homan, on the above subject, interests me. The statements regarding the dangers from the use of alcohol in medicinal preparations when not necessary, are very much to the point. Adding his views to the many others recently expressed, it seems that the time has really come to curtail the employment of alcohol as far as practicable.

Speaking pharmaceutically, I would call the prescriber's attention to the fact that the U. S. Pharmacopeia and the National Formulary as now constituted offer the choice of so many non-alcoholic liquid medicines that it is scarcely ever necessary to have to resort to those containing even small quantities of alcohol. Those containing objectionable amounts could be ignored and would never be missed.

The entire therapeutics of the Pharmacopeia and the National Formulary must be dictated by the medical profession, and I trust that many more medical writers and practitioners will take sufficient interest in the matter, so that future pharmacopeias and formularies, when issued, will be recognized as their standards in practice.

A vehicle similar to aromatic elixir but containing no alcohol can be had by physicians for the asking: Anise, cinnamon and fennel waters are now official; if needed, coriander, lemon and orange waters can be added. Any and all of these mix clear with simple, orange or any other syrup or with glycerin. Pharmaceutically, it is an easy matter to make similar amendments all down the line. All we pharmacists want to know is: What does the physician require?

I would advocate standard elixirs, syrups and the other elegant pharmaceuticals of the National Formulary and U. S.

Pharmacopeia in all cases where such preparations are desirable. I would also advocate freshly prepared and extemporaneously prescribed emulsions of all kinds—these requiring no salicylic acid to preserve them.

FRANCIS HEMM.

Government Examination of Thermometers.

ASHEVILLE, N. C. Feb. 25, 1907.

To the Editor:—Some time ago I wrote of the unreliability of clinical thermometers sold in this country under the maker's certificate. I have recently investigated this matter further, and as in the diagnosis of certain diseases the accuracy of thermometers even to a few tenths of a degree is of importance, it seems to me that the matter should be brought before the profession. I have always used the thermometer of a well-known English maker, who for years supplied Kew certificates with his thermometers, but latterly took up the American custom of certifying his thermometers by his own standard thermometers. Becoming suspicious of the surprising perfection of the certificates given, I found on having them subjected to the government test at Washington, where all thermometers having more than 3/10 of a degree of error are rejected, that a large number were in this way turned down. So much for the past. To show now the excellent effect of a complaint from the medical public when an instrument of precision is poorly made and incorrectly certified, I had my druggist send on twelve dozen of the same maker's thermometers. Of these twelve dozen only three thermometers exceeded the limits of allowable error for certification by the Government Bureau of Standards, and of those certified a large majority gave a certificate much nearer perfection than those certified a year or more ago. If the profession throughout the country who are deeply interested in accurate thermometers would be careful to insist, through their druggists, on having their thermometers certified by the government at Washington, the grade of thermometers now kept in stores would soon be very greatly improved. We would thus increase the accuracy of our work. CHARLES L. MINOR, M.D.

Marriages

HERMAN C. FRICK, M.D., to Miss Minnie Lauenstein, both of Evansville, Ind., February 20.

A. MERRELL MILLER, M.D., to Miss Jeannett Penwell, both of Danville, Ill., recently.

OLNEY GALEN PLACE, M.D., to Mrs. Ida Moensch, both of Boulder, Colo., February 16.

EDWARD E. HOPKINS, M.D., Rochester, N. Y., to Miss Hazel Davis of Buffalo, at Honeoye Falls, N. Y., February 11.

DORA I. DORN, M.D., San Francisco, and D. S. Walton of San José, Cal., at Oakland, January 26.

WILLIAM EDGAR DARNALL, M.D., Atlantic City, N. J., to Miss Emma Elizabeth Nesbitt, of Richmond, Vt., February 27.

WALTER C. ALVAREZ, M.D., San Francisco, to Miss Harriet Smyth, of Berkeley, Cal., February 22.

Deaths

Acland Oronhyatekha, M.D. Toronto University Medical Faculty; a full-blooded Mohawk Indian chief; probably the most notable man of his race, died in Savannah, Ga., March 3. Oronhyatekha was born in poverty on the Six Nation Reservation, near Brantford, Ont. His early education was at a missionary school for Indian youths. He then went to Wellesley Academy, Wilbraham, Mass., and thence to Kenyon College, where he remained for two years. He then matriculated at Toronto University. While he was studying at the university the Prince of Wales made his visit to Canada, and Oronhyatekha was deputized by the chiefs of the Six Nations to deliver the "Address to the Queen." The young chief made such an impression on the prince that he was invited to continue his studies at Oxford, and there was placed under the tutelage of Sir Henry Acland, regius professor of medicine, whose surname Oronhyatekha adopted as his Christian name. He completed his medical education at Toronto University and practiced for a while in that city. He soon developed high qualities of executive ability and business acumen, shown especially in the line of fraternal society work. He was a member of the Independent Order of Good Templars, and soon attained the highest office in its gift, which he retained for several years. He also took charge of the Independent Order of Foresters at a time when it was at a low ebb, and by his talent soon built up the organization so that it is now on a most prosperous basis. He was elected president of the National Fraternal Congress which assembled in Chicago in 1902. He also received the highest degree in masonry. The Anthropological Building at the World's Fair contained a life-size portrait of Oronhyatekha, who was described as the "greatest living Indian." Wise investments had made Dr. Oronhyatekha very wealthy and he lived in a country place at Desoronto, near Toronto, formerly the capital of the Six Nations. He had suffered from heart disease for several years, and had gone to Savannah for his health, and died in the Hotel De Soto, March 3, aged 65.

Malek A. Southworth, M.D. Censors of New York, 1846; College of Physicians and Surgeons in the City of New York, 1880; a member of the American Medical Association; formerly consulting surgeon to St. Luke's Hospital, Utica, N. Y., and resident physician at the Mississippi Quarantine Station, New Orleans; resident fellow of the New York Academy of Medicine and original fellow of the New York Medical Association; formerly president of the Santa Clara County (Cal.) Medical Society, for many years county health officer and president of the board of pensioners of Santa Clara County; who served with great distinction and honor in the Federal service during the Civil War; for twenty years a resident of San José, Cal., died at Wright's Station, Cal., February 16, from senile debility, aged 80.

Lyman W. Bliss, M.D. Geneva (N. Y.) Medical College, 1876; a member of the state and county medical societies, and one of the oldest and most respected physicians of Saginaw, Mich.; surgeon of the Tenth New York Vounteer Cavalry during the Civil War; president of the Michigan State Medical Society in 1891, and for three years mayor of Saginaw; who had gone to Texas for his health, died suddenly in San Antonio, February 19, from heart disease, aged 70. The Saginaw County Medical Society held a special meeting, February 22, at which tribute was paid to the memory of Dr. Bliss, and fitting resolutions were drafted.

John S. Love, M.D. Jefferson Medical College, 1856; a member of the American Medical Association for many years; founder of the Linn County (Iowa) Medical Society, and one of the earliest members of the Iowa State Medical Society; for fifty years an esteemed and respected practitioner of Springville, Iowa, died at his home in that place, February 22, after an illness of three weeks, aged 75.

George W. Archer, M.D. Jefferson Medical College, Philadelphia, grandson of Dr. John Archer, the first medical graduate in America; surgeon of Stonewall Jackson's brigade in the Confederate service during the Civil War, died at his home near Emmorton, Hartford County, Md., February 16, from senile debility, after a long illness, aged 83.

Robert Provan, M.D. Medical School of Harvard University, Boston, 1860; a member of the state and county medical societies; for many years prominently connected with the British and Canadian charitable societies of the city; a member of the Common Council of Boston in 1885 and 1886; died at his home in Brookline, February 23.

J. W. Beall, M. D. Memphis Hospital Medical College; Medical Department Baptist Southwestern University, Memphis, Tenn., 1899; a member of the American Medical Association, and division surgeon for the Cotton Belt Railroad; an ardent temperance advocate; was shot and killed by a saloonkeeper in Malden, Mo., February 18, aged 32.

Francis Louis Roge, M.D. Baltimore Medical College; professor of chemistry, French, Greek and Latin in St. Joseph's College, Irvington, near Baltimore, and formerly associated in the work of the Pasteur Institute, New York City, died at his home in Baltimore, February 21, from pneumonia, after an illness of less than a week, aged 45.

C. A. Elliott, M.D. Kentucky School of Medicine, Louisville, 1852; for many years a practitioner of Ballard County and later of McCracken County, Ky.; a member of the McCracken County Medical Association; died at the home of his daughter in Woodville, Ky., February 22, from senile debility, after an illness of several years, aged 79.

Thomas **P. McDonald, M.D.** University of Pennsylvania, Department of Medicine, Philadelphia, 1891; a member of the Medical Society of the State of California; of the Nevada State Medical Society and the Washoe County Medical Society, died at his home in Reno, February 1, from pneumonia, aged 45.

Ezra **K. Friermood, M.D.** Rush Medical College, Chicago, 1869; a member of the American Medical Association; a veteran of the Civil War and a practitioner of Cass, Howard and Miami counties, Ind., for 38 years, died at his home in Greentown, after an operation on the liver, February 18.

Curtis **A. Burwell, M.D.** University of the South, Medical Department, Sewanee, Tenn., 1901; a member of the American Medical Association, and a promising young physician of Salem, Va., died at his home in that city from pneumonia, February 16, after an illness of seven days, aged 30.

Harold **Abbott Wood, M.D.** Tufts College Medical School, Boston, Mass., 1906; formerly interne of the Children's Hospital, Boston, and later an interne at St. Joseph's Hospital, Providence, R. I., died in that institution from pneumonia, February 6, after an illness of one week, aged 26.

Sherwood **B. Ives, M.D.** College of Physicians and Surgeons in the City of New York, 1896; formerly assistant surgeon at the Presbyterian Hospital, New York City, died as the result of an accidental gunshot wound, self-inflicted, at the Morley Ranch, near Datil, N. M., February 16, aged 37.

Robert **B. Bedell, M.D.** Medical College of the State of South Carolina, 1854; a member of the state and county medical societies, and a prominent citizen of Lee County, Ala., died at his home near Farmville, February 13, after an illness of three weeks, from pneumonia, aged 72.

Robert **Henry Davis, M.D.** New York University Medical College, 1856; Faculty of Medicine of Queen's University and Royal College of Physicians and Surgeons, Kingston, Ont., 1888; sheriff of Haldimand County, Ont., died at his home in Cayuga, February 12, aged 79.

William **Russell Elder, M.D.** Berkshire Medical College, Pittsfield, Mass., 1847; one of the oldest practitioners of Terre Haute, Ind., and a veteran of the Civil War, died February 21, at his home in Terre Haute, from senile debility, after an illness of five months, aged 82.

Herbert **B. Williams, M.D.** University College of Medicine, Richmond, Va., 1903; a member of the state and county medical societies; of Gladys, Va., died at St. Andrew's Home, Lynchburg, Va., from pneumonia, February 20, after an illness of several weeks, aged 29.

Franklin **Robert Williams, M.D.** University of Louisville (Ky.) Medical Department, 1892; a member of the American Medical Association; of Kingsbury, Texas, died in San Antonio, Texas, from exhaustion, March 21, 1906, after an illness of five days, aged 45.

Samuel **A. McDougall, M.D.** Albany (N. Y.) Medical College, 1857; one of the founders of the Massachusetts Dental Society and a member of the state and county medical societies, died at the home of his daughter in Jamaica Plain, February 8, aged 76.

Thaddeus **T. Weatherly, M.D.** New York University Medical College, 1861; surgeon of the Sixth Alabama Infantry in the Confederate service during the Civil War, died at his home in Bennettsville, S. C., February 13, after an illness of several months, aged 70.

John **William Barker, M.D.** Medical Institution of Yale College, New Haven, Conn., 1860; medical examiner in Woodbridge, Conn., for several years, died at his home in Woodbridge, February 16, from pleurisy, after an illness of one week, aged 72.

James **Clarke Thomas, M.D.** College of Physicians and Surgeons in the City of New York, 1868; of New York City, died in the Good Samaritan Hospital, Los Angeles, Cal., February 20, from pneumonia, after an illness of one week, aged 63.

John **C. Howe, M.D.** Laval University, Medical Department, Quebec, 1886; government immigration medical inspector at Quebec, and one of the best known practitioners of that city, died at his home, February 2, suddenly, from heart disease, aged 47.

Joseph **J. O'Shea, M.D.** Bellevue Hospital Medical College, New York City, 1896; a medical inspector of public schools, of Paterson, N. J., died at his home in that city, February 20, from tuberculosis, after an illness of three months, aged 33.

John **Samuel Wilson, M.D.** Medical College of Georgia, Augusta, 1846; a surgeon in the Confederate Army during the Civil War; died at St. Joseph's Infirmary, Atlanta, Ga., February 11, from arteriosclerosis, after a long illness, aged 78.

William Neely, M. D. Jefferson Medical College, Philadelphia, 1847; for many years a practitioner of Stark County, Ohio; died at his home in Wichita, Kan., February 15, from senile debility, after an illness of several weeks, aged 87.

David E. Matteson, M.D. Western Reserve University, Medical Department, Cleveland, 1873; a member of the state and county medical societies, died at his home in Marion, Ind., February 26, from pneumonia, after a short illness, aged 56.

Joseph W. Mann, M.D. Cincinnati College of Medicine and Surgery, 1896; of Cincinnati; for the last eight years assistant physician of Longview Hospital; died in Christ's Hospital, Cincinnati, February 23, after a brief illness, aged 42.

Frank W. Talley, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1887; for ten years gynecologist at St. Agnes' Hospital, Philadelphia, died from nephritis, at his home in Philadelphia, February 16, aged 41.

Paul C. Yates, M.D. St. Louis (Mo.) Medical College, 1861; a member of the state and county medical societies; a surgeon in the Confederate service during the Civil War, died at his home in Neosho, Mo., February 18, aged 70.

Frank J. Moses, M.D. Regents of the University of New York State; formerly surgeon in the Confederate service; for fifteen years a practitioner of New York City, died at the home of his sister in Washington, D. C., January 19.

Alvin R. Alley, M.D. Medical College of the State of South Carolina, Charleston, 1869; a Confederate veteran, died at his home in Atlanta, Ga., February 21, from cerebral hemorrhage, after a short illness, aged 63.

William J. Owsley, M.D. University of Louisville, Medical Department, 1875; at one time township trustee, died at his home in Thorntown, Ind., from malignant disease, after an illness of several months, aged 55.

George Herbert Nichols, M.D. Homeopathic Medical College and Hospital, New York City, 1886; of Williamsburg, N. Y., died February 17, at Stamford, Conn., from appendicitis, after an illness of eleven weeks, aged 43.

Robert F. Wayland, M.D. University of Virginia, Medical Department, Charlottesville, 1847; for more than fifty years a resident of New Franklin, Mo., died at a hospital in St. Louis, February 8, aged 84.

Patterson Leonard McKinnie, M.D. Rush Medical College, Chicago, 1872; a retired practitioner of Evanston, Ill.; surgeon during the Civil War, died at Riverside, Cal., March 3, from heart disease, aged 62.

Olcott C. Orendorff, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1862; died at his home in Middlefield, N. Y., February 12, three weeks after a surgical operation, aged 76.

Mark R. Cassady, M.D. Medical College of Georgia, Augusta, 1858; of Thomasville, Ga., died at Bronson, Fla., where he had gone to spend the winter, February 17, from pneumonia, aged 77.

Jacob Greenawalt, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1870; died at his home in Pittsburg, February 19, after an illness of five days, aged 76.

Joseph A. Loeb, M.D. Yale University, Medical Department, New Haven, 1903; died at his home in Stamford, Conn., February 24, from typhoid fever, after a short illness, aged 29.

C. P. Kennedy, M.D. Tennessee Medical College, Knoxville, 1902; of Wildersville, Tenn., died at the home of his parents in Knoxville, Tenn., recently, from tuberculosis, aged 30.

Calvin D. Vilas, M.D. University of Vermont, College of Medicine, Burlington, 1846; died at his home in Lake City, Minn., February 18, after an illness of several years, aged 84.

Emerson S. Northup, M.D. New York Homeopathic Medical College and Hospital, New York City, 1879; a veteran of the Civil War, died at his home in Los Angeles, recently.

John Robert Berry, M.D. University of Maryland School of Medicine, Baltimore, 1893; died at his home in Baltimore, February 7, after an illness of two months, aged 37.

William S. B. Poole, M.D. Western Reserve University, Medical Department, Cleveland, died at his home in Ruffsdale, Pa., recently from dropsy, after a long illness, aged 52.

H. Russell Burner, M.D. Eclectic College of Pennsylvania, Philadelphia, 1870; died at his home in Los Angeles, Cal., February 13, from cardiac embolism, aged 67.

William E. Fifield, M.D. Cooper Medical College, San Francisco, 1876; died at his home in Tacoma, Wash., February 23, after an illness of a year and a half, aged 80.

Benjamin R. Bevier, M.D. College of Physicians and Surgeons in the City of New York, 1849; died at his home in Napanoch, Ulster County, N. Y., February 22, aged 75.

Louis L. Laronge, M.D. Homeopathic Hospital College, Cleveland, 1893; died at his home in Cleveland, February 25, from dropsy, after a lingering illness.

William Patterson Biles, M.D. Eclectic Medical Institute, Cincinnati, 1879; died at his home in Carlyle, Ill., February 18, aged 56.

William Merchant, M.D. Lewiston, 1882, died at his home in Otisville, Mich., February 18, from cerebral hemorrhage, aged 55.

Stephen D. Meserve, M.D. Miami Medical College, Cincinnati, 1857; died at his home in Robinson, Ill., January 27, aged 80.

William H. Hodgson, M.D. Royal College of Physicians, London, 1866; died in Mattoon, Ill., February 18, aged 73.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

DIFFERENTIATION OF TUBERCULAR ARTHRITIS AND RHEUMATIC ARTHRITIS.

——, Feb. 18, 1907.

To the Editor:—Among the questions recently asked by the Board of Examiners of Delaware (THE JOURNAL, Jan. 26, 1907, p. 365), the following was given under practice of medicine: Differentiate tubercular arthritis and rheumatic arthritis. This subject has been a stumbling block to me for a long time, and any information that will aid me in making a differential diagnosis will be appreciated. W. F. T.

ANSWER.—Although there is considerable evidence pointing to the specific nature of rheumatism, this evidence is not yet accepted by all observers as conclusive. Nevertheless, while the investigators are determining the existence or non-existence of a particular microbe or microbes which give rise to the clinical symptom-complex or syndrome of articular rheumatism, the existence of such a syndrome may from a clinical view-point, be accepted. This clinical syndrome thus provisionally accepted possesses two features which may be considered characteristic. These are: First, the involvement of many joints (polyarticular), the joints involved being affected either simultaneously or consecutively, and second, the facility or rapidity with which all symptoms may disappear from a joint apparently extensively involved. In just so much as the case fails to possess these characteristic features do the chances of it being rheumatism diminish, so that when we have to deal with a persistent arthritis of but one joint (monarticular) this fact alone is presumptive evidence that the case is not one of rheumatism. As there is no possibility of confusing articular rheumatism possessing the above-mentioned features with tubercular arthritis, the question can only be considered to refer to arthritis of the monarticular type. An arthritis may be produced by an infection with a variety of micro organisms so that the real diagnosis consists not in determining the presence of the joint inflammation, which is usually seen at a glance, but in determining the particular kind of infection which is present in the joint. The appearances of the joint are not always characteristic, hence the particular kind of infection must often be surmised from the antecedent or concomitant circumstances of the case or demonstrated directly by bacteriologic methods. Thus the typhoid bacillus may produce an arthritis in connection with or following typhoid fever; the streptococci in scarlatina; Pfeiffer's bacillus in influenza; the gonococcus in connection with a recent gonorrheal infection; the pneumococcus in pneumonia or a general pneumococci infection; the staphylococci in tonsillitis or furunculosis, etc.; the *Spirochæta pallida* in syphilis; the tubercle bacillus in tuberculosis, etc., etc. These infections are almost always of the monarticular variety and may assume an acute or a chronic course. The import of this apparent digression from the main issue of the question is to point out that, excepting those cases due to trauma and the so-called arthropathies, practically all cases of arthritis that have been carefully investigated have been found to be due to some of the well-known varieties of infection, and it has not yet been demonstrated that there is a particular form of monarticular arthritis due to a specific organism which is entitled to the term "rheumatic arthritis," although the term is unfortunately but too often applied to almost any form of joint inflammation. The real question becomes, therefore, how to distinguish tubercular arthritis? It occurs usually in young subjects and affects most frequently one of the large joints; knee, hip, elbow, ankle. It is slow in its onset and runs a chronic course. As in the large majority of the cases the trouble is primarily osteal, the early symptoms are rather juxta-articular than articular; an indefinite pain; a slight limp; beginning limitation of motion of the joint. When the joint proper becomes involved the symptoms are more pronounced; the pain is increased; there are spasmodic contractions of the muscles, particularly at night; the joint becomes fixed; the synovial folds are palpably thickened; the whole joint is enlarged, which enlargement becomes more apparent owing to the rapid atrophy of the neighboring muscles, etc. When the synovial membrane becomes markedly thickened by reason of the tubercular granulations, it has a characteristic pseudo-fluctuating feel. If the case progress from bad to worse, tubercular abscesses form which eventually open, leaving discharging sinuses. The general health always declines from the prolonged suffering and constant slow absorption of toxins so that the whole case presents a picture which can scarcely be mistaken for any other condition.

THE RUSSO "REACTION."

CINCINNATI, OHIO., Feb. 23, 1907.

To the Editor:—In THE JOURNAL, February 16, page 626, it is stated, quoting Cousin, Costa and Gandy, that the Russo "reaction" is due to the admixture of the blue with the yellow urine. As to the value of the Russo "reaction" in the early diagnosis of typhoid I am as yet unwilling to give an opinion. I do not believe, however, that the reaction is due to the mere color mixing. In the last two years I have had my classes in urinalysis experiment with the reaction in no less than a hundred cases, both normal and febrile, in which latter we would have to deal with urine more or less highly concentrated. In each instance several control tests were made. The blue was used in 1/10 per cent. solution, four drops of which were added to about 15 c.c. (3 drams) of urine. In only one non-typhoid case did the typical emerald green appear, although highly concentrated urine from other diseases was used. On the other hand some of the typhoid samples were so highly concentrated that instead of being yellow they were of a decided reddish cast and red and blue mixed will not produce emerald green or any other kind of green. In one instance some typhoid urine was mixed with a number of other samples (previously negative), and the typical emerald green appeared. I have made this test so frequently with a typhoid urine and other urines of very nearly the same concentration (measured by the specific gravity), and color simultaneously, that merely color mixing does not satisfactorily explain the phenomenon to me. WILLIAM H. SMITH, M.D.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending March 2, 1907:

Morris, S. J., asst.-surgeon, granted four days' leave of absence about February 26.

Wakeman, Wm. J., surgeon, sick leave of absence further extended one month.

Shepard, J. L., asst.-surgeon, advanced from grade of first lieutenant to that of captain, from February 21.

Steer, S. L., asst.-surgeon, granted three months and fifteen days' leave of absence.

Ashford, B. K., asst.-surgeon, detailed member of examining board, to determine the results of preliminary examination of applicants and for final examination of applicants for final examination of candidates for admission to the Medical Corps of the Army, vice Capt. Harry L. Gilchrist, asst.-surgeon, hereby relieved.

McCallum, Francis M., contract surgeon, left Fort D. A. Russell, Wyo., on leave of absence for one month.

Porter, Elias H., contract surgeon, left Fort Logan H. Roots, Ark., for duty at Fort Clark, Texas.

Sievers, Robert E., contract surgeon, relieved from duty at Fort William Henry Harrison, Mont., and ordered to accompany the 25th Infantry to the Philippine Islands for duty.

Hayes, Melville A., contract surgeon, relieved from duty in the Department of the Columbia, and ordered to Washington, D. C., for annulment of contract.

Long, Charles J., dental surgeon, left FortAssinniboine, Mont., and arrived at Fort William Henry Harrison, Mont., for duty.

Whinnery, Jean C., dental surgeon, returned from Fort Liscum, Alaska, to Fort Wright, Wash., for duty.

Brooks, John D., contract surgeon, order for Fort Sam Houston, Texas, revoked.

Hughes, Leonard S., contract surgeon, returned to San Francisco from leave of absence, and ordered to duty at Depot of Recruits and Casuals, Angel Island, Cal.

Holmes, Thomas G., contract surgeon, relieved from duty at Fort Meade, S. D., and ordered to Fort Sill, Okla., for duty.

Branch, Frederick D., contract surgeon, order for Fort Preble, Maine, revoked; will proceed home, East Springfield, N. Y., for annulment of contract.

Miller, William G., contract surgeon, relieved from treatment at the Army General Hospital, Washington Barracks, D. C., and ordered to his home, New Castle, Pa., for annulment of contract.

Allen, Ira A., contract surgeon, returned to duty at Fort Dade, Fla., from leave of absence.

Greenwell, Samuel A., contract surgeon, relieved from duty at Fort Barrancas, Fla., and ordered to his home, Cleburne, Texas, for annulment of contract.

Gregory, Verdo B., contract surgeon, relieved from duty at Fort Adams, R. I., and ordered to proceed to his home, Janesville, Wis., for annulment of contract.

Navy Changes.

Changes in the Medical Corps, U. S. Navy, for the week ending March 2, 1907:

Lumsden, G. P., medical inspector, ordered to the Naval Recruiting Station, Indianapolis.

Surgeon H. C. Curl, detached from special duty in the Bureau of Medicine and Surgery, Navy Department, and ordered home to wait orders.

Odell, H. E., surgeon, commissioned surgeon from Sept. 6, 1906.

Michels, R. H., P. A. surgeon, commissioned P. A. surgeon from Oct. 8, 1906.

Bogert, E. S., Jr., surgeon, detached from the *West Virginia* and ordered home.

Marsteller, E. H., surgeon, detached from the *Franklin* and granted sick leave for three months.

Reeves, I. S. K., P. A. surgeon, discharged from treatment at the Naval Medical School Hospital, Washington, D. C., and ordered to the *Franklin*.

Hamar, A., pharmacist, discharged from treatment at the Army General Hospital, Fort Bayard, N. M., and ordered home to wait orders.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Feb. 27, 1907:

Sprague, E. K., P. A. surgeon, granted leave of absence for two days.

Boggess, J. S., P. A. surgeon, relieved from duty at Stapleton, N. Y., and directed to report to the chief medical officer, Ellis Island, N. Y., for temporary duty, after which to proceed to St. John, N. B., for exclusive duty in connection with the examination of aliens.

Creel, R. H., asst.-surgeon, granted leave of absence for one month.

Miller, W. W., asst.-surgeon, granted leave of absence for twelve days from February 19 on account of sickness.

Bullard, J. T., acting asst.-surgeon, granted leave of absence for 30 days from Feb. 21, 1907.

Goldsborough, B. W., acting asst.-surgeon, granted extension of leave of absence for 14 days from February 18.

McConnell, E. F., acting assist.-surgeon, granted leave of absence for 30 days from February 25.

Morris, G. A., pharmacist, department letter of Jan. 31, granting leave of absence for 15 days amended to read for 11 days only.

RESIGNATION.

Mr. A. M. Thomas, resigned as pharmacist of the third class, effective February 23.

Woods, C. H., pharmacist, removed from the service, effective February 28.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service during the week ended March 1, 1907:

SMALLPOX—UNITED STATES.

California: Los Angeles, Feb. 2-9, 2 cases.
Georgia: Augusta, Feb. 12-19, 6 cases.
Illinois: Castleton, Jan. 12, 2 cases; Chicago, Feb. 16-23, 2 cases; Galesburg, Feb. 9-16, 11 cases; Jacksonville, 11-15, 3 cases.
Indiana: Elkhart, Feb. 9-16, 3 cases; Indianapolis, Feb. 10-17, 8 cases; Lafayette, Jan. 27-Feb. 4, 2 cases, Feb. 4-18, 1 case; South Bend, Feb. 9-16, 2 cases; Vincennes, Feb. 9-16, 1 case.
Iowa: Mahaska County, Oskaloosa included, May 28-Feb. 22, 141 cases.
Kansas: Kansas City, Feb. 9-16, 3 cases (imported).
Louisiana: New Orleans, Feb. 9-16, 10 cases (5 imported).
Mississippi: Natchez, Feb. 9-16, 3 cases.
Missouri: St. Joseph, Feb. 9-16, 30 cases; St. Louis, 1 case.
New York: New York, Feb. 9-16, 2 cases.
Ohio: Cincinnati, Feb. 16-22, 2 cases.
Washington: Spokane, Feb. 9-16, 12 cases.
Wisconsin: La Crosse, Feb. 9-16, 2 cases; Milwaukee, Jan. 26-Feb. 2, 4 cases; Feb. 9-16, 4 cases, 1 death.

SMALLPOX—FOREIGN.

Africa: Lorenço Marquez, Dec. 1-31, 1 death.
Brazil: Pernambuco, Jan. 2-15, 68 deaths.
Canada: New Brunswick, Feb. 21, present; Nova Scotia: Glasgow, Feb. 9-16, 17 cases; Truro, present.
Chile: Coquimbo, Jan. 12, present; Iquique, Jan. 12, present.
France: Paris, Jan. 26-Feb. 2, 5 cases.
Great Britain: Bristol, Jan. 26-Feb. 2, 1 case.
India: Calcutta, Jan. 5-19, 41 deaths; Rangoon, Jan. 5-12, 2 deaths.
Mexico: Vera Cruz, Feb. 2-9, 1 case.
Netherlands: Rotterdam, Feb. 2-9, 1 death.
Russia: Moscow, Jan. 26-Feb. 2, 1 case; Odessa, Jan. 19-Feb. 2, 48 cases, 6 deaths; St. Petersburg, Feb. 12-26, 3 cases, 1 death.
Spain: Barcelona, Jan. 21-31, 6 deaths.
Turkey in Asia: Beirut, Jan. 26-Feb. 2, present.

YELLOW FEVER.

Mexico: Veracruz, Feb. 26, 1 case.
Venezuela: La Guayra, Jan. 9, 2 cases.
West Indies: Trinidad, Port of Spain, Feb. 4-5, 1 case, 1 death.

CHOLERA—INSULAR.

Philippine Islands: Provinces, Jan. 5-12, 2 cases, 2 deaths.

CHOLERA—FOREIGN.

Ceylon: Colombo, Jan. 15-22, 4 cases, 4 deaths.
India: Calcutta, Feb. 2-19, 526 deaths; Rangoon, Jan. 2-12, 15 deaths.

PLAGUE—INSULAR.

Hawaii: Honolulu, Jan. 29, 1 death (on S. S. *America Maru*).

PLAGUE—FOREIGN.

Australia: Brisbane, Dec. 15-22, 1 case, 1 death.
Chile: Antofagasta, Jan. 12, 6 cases, 4 deaths.
India: General, Jan. 5-12, 12,945 cases, 10,343 deaths; Bombay, Jan. 15-22, 43 deaths; Calcutta, Jan. 5-19, 26 deaths; Rangoon, Jan. 5-12, 17 deaths.
Japan: Matsuyama, Jan. 14, present; Osaka, present.
Peru: Callao, Jan. 19, 1 case; Catacaos, Jan. 8, 2 cases; Chiclayo, 7 cases; Lambayequa, 1 case; Paita, 1 case; San Pedro, 7 cases; Trujillo, Jan. 8, 6 cases.

Association News

NEW MEMBERS.

List of new members of the American Medical Association for February, 1907:

ALABAMA.

Black, W. F., Sayreton.
Moore, J. A., Birmingham.
Shipp, M. G., Albertville.
Speir, P. V., Furman.
Tippin, P. H. M., Brewton.
Vance, J. G., Warrior.

ARIZONA.

Hawley, C. F., Bisbee.

ARKANSAS.

Bathurst, W. R., Little Rock.
Ogden, M. D., Little Rock.
Pate, C. N., Ft. Smith.
Stevens, C. C., Blytheville.

CALIFORNIA.

Brown, Rexwald, Santa Barbara.
Crawford, W. T., Fowler.
Doane, F. L., Red Bluff.
Keith, W. E., San José.
Koepke, F. H., Watsonville.
Rowell, H. N., Berkeley.
Snyder, G. S., San Francisco.
Sumner, Percy, San Quentin.
Walsh, F. D., Loyalton.

COLORADO.

Manns, Rudolph, Denver.
Schenck, D. S., La Jara.
Scholz, S. B., Jr., Denver.
Todd, J. C., Denver.

CONNECTICUT.

Adam, J. G., Canaan.
Blank, E. F., Bridgeport.
Taylor, Maude W., Hartford.

DISTRICT OF COLUMBIA.

McPherson, D. M., Washington.

FLORIDA.

Neal, T. A., Sanford.

GEORGIA.

Bullard, W. M., Monticello.
Cole, J. F., Carrollton.
Dallas, D. Q., Pavo.
Faulk, G. A., Alapaha.
Hamilton, C., Rome.
Hardman, W. B., Commerce.
Wilson, Samuel, Yatesville.
Woods, J. E., McDonough.

ILLINOIS.

Bain, W. G., Champaign.
Cherry, T. E., Cowden.
Cleland, J. S., Swanwick.
Cook, Mary L., Chicago.
Cunliffe, R. A., Chicago.
Danforth, W. C., Chicago.
Gordon, L. E., Chicago.
Johnson, W. W., Evanston.
Kuhn, Le R. P., Fairbury.
Lockwood, C. R., Atwood.
McClelland, S. E., Decatur.
McNair, O. H. P., Batavia.
Moore, G. H., Joy.
Needham, F. S., Chicago.
O'Shea, David, Chicago.
Otradovec, Joseph, Chicago.
Poos, G. H., Trenton.
Reuss, A. Le R., Belleville.
Weber, G. H., Peoria.

INDIANA.

Austin, M. A., Anderson.
Bailey, H. T., Littles.
Heistand, H. J., Indianapolis.
Kennedy, C. M., Camden.
Scott, J. W. C., Columbia City.
Weiss, H. G., Rockport.

INDIAN TERRITORY.

Coryell, Martin, Chickasha.
Kelleam, R. T., Sallisaw.

IOWA.

Anderson, E. K., St. Charles.
Bowser, W. F., Buffalo.
Conkling, W. S., Des Moines.
Cresap, R. N., Bonaparte.
Hobby, E. E., Iowa City.
Lacey, T. B., Jr., Council Bluffs.
McLaughlin, W. H., Webster.
Nordgren, Esaias, McCallsburg.
Sickler, Daniel, Ogden.
Tubbs, R. B., Council Bluffs.

KANSAS.

Bennett, R. M., Mound Valley.
Chapin, Charles, Frontenac.
Dickinson, Amelia A., Pittsburg.
Evans, E. A., Conway Springs.
Fairbanks, W. F., Kansas City.
McKnight, G. C., Hiawatha.
Millard, S. T., Carbondale.
Newton, L. A., Chicopee.
Revell, A. T., Scammon.
Smith, H. H., Highland.

KENTUCKY.

Alexander, J. M., Fulton.
Dabney, A. S., Golden Pond.
Ferguson, C. N., Nebo.
Finley, A. F., Ilsley.
Higdon, L. S., Peonia.
Honaker, Harry P., Lilletown.
Peddicard, Frank L., Foster.
Shaw, C. W., Alexandria.
Stites, F. M., Hopkinsville.
Usher, H. V., Oscar.
Wolfe, J. G., Frances.

LOUISIANA.

Dorrestein, C. A. M., New Orleans.
Durel, W. J., Covington.

MAINE.

Clough, G. H., Dexter.
Leach, C. H., Lincolnville.
Pritham, F. J., Greenville.

MARYLAND.

Bordley, James, Jr., Baltimore.
Chaney, Thomas M., Chaney.
Rich, H. L., Port Deposit.

MASSACHUSETTS.

Clark, J. D., Auburndale.
Davis, E. L., Springfield.
MacKerrow, H. G., Worcester.
Patterson, Alice M., Peabody.
Pike, W. C., Boston.
Smith, J. H., Boston.
Thompson, G. H., North Adams.

MICHIGAN.

Beisman, Joseph, Detroit.
Bradshaw, B. C., Mayville.
Kennedy, R. L., Howell.
Ostrander, Herman, Kalamazoo.

MINNESOTA.

Bong, J. H., Jasper.
Merrill, J. E., Amboy.
Reid, William, Deerwood.
Richardson, W. E., Slayton.

MISSISSIPPI.

Cooper, S. E., Water Valley.
Stringer, J. J., Oak Vale.

MISSOURI.
Bennett, E. C. Bolckow.
Bradshaw, J. T., Montrose.
Chamberlain, O. M. C., Rockport.
Dunham, S. A., Kansas City.
Eaton, J. A., Belgrade.
Epperson, H. E., Browning.
Fries, W. A., St. Louis.
Goodrich, E. E., Crane.
Gordon, F. N., St. Louis.
Greenwood, G. H., Fredericktown.
Haden, J. W., Plevna.
Jefferies, C. O., Savannah.
John, Gomer, Wilcox.
Johnson, H. C., Meadville.
Large, S. D., Hopkins.
Larrabee, J. A., Barnard.
Lester, R. B., Desloge.
Martin, H. L., Kansas City.
Nash, W. H., St. Louis.
Northcutt, J. R., Knox City.
Patterson, W. R., Tipton.
Perkins, G. B., Elvins.
Safford, W. G., Tarkio.
Sargent, D. A., Hopkins.
Senseney, E. T., St. Louis.
Shelton, C. W., Mt. Vernon.
Simmons, B. B., Oregon.
Skinner, E. H., Kansas City.
Smith, R. M., Kansas City.
Talbot, C. W., Nevada.
Tipton, P. L., Caruthersville.
Wood, W. S., Oregon.

MONTANA.
Flinn, F. M., Libby.
Patterson, E. B., Philipsburg.

NEBRASKA.
Edmiston, A. W., Omaha.
Young, W. R., Ansley.

NEVADA.
Sanford, Louise, Reno.

NEW JERSEY.
Gordon, A. L., Burlington.

NEW YORK.
Atwood, C. E., New York City.
Austin, S. E., Auburn.
Baird, A. W., New York City.
Blank, M. I., New York City.
Brinsmade, D. B., New York City.
Bullowa, J. G. M., New York City.
Campbell, G. B., New York City.
Carmer, M. E., Lyons.
Clarke, H. E., Glens Falls.
Denton, M. P., New York City.
Frink, C. A., New York City.
Gignoux, J. E., New York City.
Hamlen, G. D., New York City.
Haubold, H. A., New York City.
Hedden, A. W., Syracuse.
Hurlbut, L. R., Lockport.
Keator, H. M., New York City.
Livermore, I. W., Gowanda.
Lockwood, G. R. New York City.
May, W. R., New York City.
McGrane, M. A., Troy.
McWilliams, C. A., New York City.
Mitchell, Sidney, Jr., Saranac.
Murray, Janet, Schenectady.
Pisko, Edward, New York City.
Racoosin, Wm., Centerville.
Roseboom, J. L., Rochester.
Safford, J. E., Stamford.
Satterlee, R. H., Buffalo.
Scott, G. D., New York City.
Searing, B. H., New York City.
Schroeder, Wm. Jr., New York City.
Slocum, F. W., Camillus.
Smith, A. H., Camden.
Smith, G. W., Utica.
Spingarn, Alexander, Brooklyn.
Steinach, Wm., New York City.
Strang, W. W., New York City.
Taylor, D. M., Edwards.
Thurber, S. W., New York City.
Valentine, J. J., New York City.
Waugh, D. W., Brooklyn.
Westlake, A. J., Elmira.
Whitwell, J. F., Buffalo.
Wilber, H. C., Pine Plains.

NORTH CAROLINA.
Foust, I. H., Salisbury.
McKay, J. F., Lillington.
Moore, B. S., Charlotte.
Newell, H. A., Louisburg.
Stanton, D. A., High Point.

NORTH DAKOTA.
MacLachlan, T. M., Bismarck.
Pryse, T. S., Dawson.
Stewart, M. A., Omemee.

OHIO.
Baer, Mary, Canal Dover.
Blackburn, Ella., New Vienna.
Blackford, R. A., Martins Ferry.
Bixell, P. D., Pandora.
Carmedy, M. H., Painesville.
Dewey, H. R., Bellevue.
Hussey, M. F., Sidney.
Lange, Sidney, Cincinnati.
Lott, F. S., Columbus.
McAllister, J. L., Black Fork.
Mitchell, J. A., Newark.
Souder, R. L., Ada.
Vos, Arthur, Cincinnati.
Wells, C. H., Summit Station.

PENNSYLVANIA.
Astley, G. M., Philadelphia.
Brister, Samuel, Philadelphia.
Brown, H. McV., Philadelphia.
Burns, E. W., Honesdale.
Cashman, E. W., York Springs.
Davis, P. J., Scranton.
Faught, F. A., Philadelphia.
Grander, F. L., Forest City.
Griffith, M. E., Monessen.
Heilman, R. M., Leechburg.
Krall, J. T., Philadelphia.
Ingram, C. H., Pittsburg.
Kane, C. A., Pittsburg.
Lamon, G. T., New Kensington.
Price, J. J., Olyphant.
Stephens, T. D., Penn Run.
Vastine, J. M., Catawissa.
Washburn, Clayton, Susquehanna.

RHODE ISLAND.
Ferguson, J. B., Providence.

SOUTH CAROLINA.
Green, C. I., Orangeburg.
Stroud, E. C., Marietta.

SOUTH DAKOTA.
Sandmann, G. A., Parkston.
Seapy, J. A., Geddes.
Swett, C. H., Presho.

TENNESSEE.
Heffernan, J. L., Jellico.
Sumners, W. P., Fayetteville.

TEXAS.
Beckmann, A., Oldenburg.
Blythe, W. H., Mount Pleasant.
Bush, J. A., Winnsboro.
Combs, R. L., Kerrville.
Dorset, D. H., Thurber.
Ehlinger, Otto, La Grange.
Gillette, W. R., Cuero.
Gowen, J. D., Queen City.
Gregory, C. L., Terrell.
Johnson, R. A., Flatonia.
Lowry, W. E., Laredo.
Lipscomb, C. D., Quitman.
Mitchell, R. E., Campbell.
Morgan, E. H., Granburg.
Murray, E. C., Houston.
Perry, G. F., Hamilton.
Sauvignet, E. H., Laredo.
Thornton, Henry, Pittsburg.
Wilder, J. H., Hooks.
Wisdom, W. E., Jefferson.
Wood, Martha A., Galveston.
Zoesper, J. S., Ammansville.

UTAH.
Richards, R. T., Salt Lake City.
Rothwell, W. H., Murray.

VERMONT.
Townsend, W. W., Rutland.

VIRGINIA.
Carter, H. P., McKenney.
Godwin, I. R., Fincastle.
Greiner, A. B., Rural Retreat.
Haislip, G. W., Lorton Valley.
Henderson, T. B., Wakefield.
Sloan, J. W., Richmond.

WASHINGTON.
Palamountain, W. B., Colfax.

WEST VIRGINIA.
Booher, W. T., Bethany.
Cherry, H. J., Coketon.
Harris, L. N., Mill Creek
Lantz, Percival, Alaska.
Slater, C. N., Clarksburg.

WISCONSIN.
Bassett, V. H., Wauwatosa.
Blanchard, A. C., Linden.
Brown, E. B., Horicon.
Kahn, Joseph, Milwaukee.
Lindores, J. D., Stevens Point.
McKee, F. W., Richland Center.
Scholz, G. M. F., Milwaukee.
Watterson, W. H., Fox Lake.

WYOMING.
Chambers, Oliver, Rock Springs.

HAWAII.
O'Neill, M. J., Eleele, Kauai.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, CONTRACT PRACTICE, INSURANCE FEES, MEDICAL LEGISLATION, ETC.

METHODS AND RESULTS OF ORGANIZATION WORK IN KENTUCKY.

J. N. McCORMACK, M.D.
Chairman of the Committee on Organization of the American Medical Association.
BOWLING GREEN, KY.

As is generally known, I have been working outside of my own state almost constantly for the past five years. When the opportunity came for me to make an itinerary here, the importance and possibilities were fully realized by all in authority in the State Association, and every one lent a willing hand.

PRELIMINARY WORK.

Dr. Bullitt, state secretary and editor, took up the matter systematically in the *Kentucky State Medical Journal*, explained all our plans and purposes, and showed how and why it was a work of much practical importance in the daily life of every physician and citizen. He urged every county society to discuss the matter freely, and to indicate to its councilor where each meeting could be held to the greatest advantage.

When the profession had been thus fully advised, a meeting of the council and all other officials of the State Medical Association was called to work out the details, and especially to solve the difficult problem of inducing the laity to come out to hear a doctor talk. I attended this meeting and gave to these earnest men, each of them my personal friend and coworker in many legislative and other contests, the benefit of my experience in other states, and explained fully what was expected of them and of their county societies, if the best results were to be secured. After full discussion it was decided to confine the appointments to counties where the profession was already so well organized as to give promise of good audiences of both the profession and public, without regard to the size of the town or city. It was also decided, in order that I might speak in as many counties as possible, and because I had already met the societies more than once in almost every county, that afternoon and evening meetings should be held daily, at easily accessible points, and that all of these should be for the laity. All these things understood, and the places of the meetings in each district decided, the order and dates of the appointments were courteously left for me to arrange with the aid of a well-informed railway passenger agent. The itinerary was published in the next issue of the *State Journal*, marked copies of which were sent to every physician of the state whether a member or not, with ringing editorials urging each of them to arrange to attend one or more of the meetings with their leading lay friends and patrons. As will be seen, the itinerary covers all except the southwestern and northeastern districts, which are to be visited at a later date.

About two weeks before the meeting in his county or district, each physician, whether or not a member, or even eligible, received a personal letter from Dr. Bullitt, enclosing the itinerary, urging him to attend and to bring his wife and his influential patrons. A few days later, he received a similar letter from his councilor, couched in different terms, followed, later on, by one from the secretary of his county society, all with the same end in view. All these letters were prepared in Dr. Bullitt's office, and sent with addressed and stamped envelopes to the respective officials named, and needing only their signatures before mailing. I have licensed every physician in Kentucky, of every school or system, and know most of them personally. About two days before the meeting in his district or county, each of them received a personal letter from me, telling him why and how he ought to try to make the meeting a success. I told him that I expected in my talk to explain fully what should be the relations between the doctors and the people, and, in a plain, practical heart-to-heart way, would show that every true interest of theirs and ours were inseparable; and that I would show that the poverty so prevalent in the profession is far more important and dangerous to

them than to us, illustrating this by example after example, from the experience of a long and busy life. I told him that I could only hope to make the meetings helpful to him if he and his patrons, good men and women, were present, but that, if he would get them there, I promised in advance to make it worth more than a month's practice to him, and that this would be one of the least of the benefits. It was easy to reach the profession in this way because both the state association office and that of the State Board of Health, which work hand in hand in everything, have a constantly revised card-index register, so that practically none would be overlooked. The aid of the newspapers was also enlisted in every county. This was the easier because the press has co-operated in all the public health work here to an extent probably not true in any other state.

All this cost time, effort and considerable money, but the council considered it an excellent investment; the result proved that they were wise in doing so. They considered it as just as it was wise. The American Medical Association generously proposed to meet all the direct expenses of a work undertaken solely for the instruction and uplifting of the profession and people of Kentucky. It was known that I had never taken an application for membership in that Association, or a subscription for THE JOURNAL, and never intended to do so. It was expected, on the other hand, that the membership in the county and state societies would be largely increased, and it was felt that no labor or expense should be spared to make the meetings successful. Now for the outcome.

THE MEETINGS.

Of the forty-four meetings arranged for, all but two were well attended, and the profession in these two counties broke down after the appointments were made. Physicians came with their families and patrons, often from far-off country districts and adjoining counties, and some of them attended two or more meetings. Lawyers, teachers, ministers, editors, farmers, bankers, merchants, city and county officials, with their wives and daughters, made up the audiences, and took an active and intelligent part in the discussion which always followed my talk. It was interesting to learn from the discussions, as well as privately, that no laymen of the thoughtful classes, those whose attendance was especially important, was ever present except on personal invitation from his physician, or a written one from the county society. Many said they had read the newspaper notices, and that these had done good in reminding them of the hour, but all of them said they would have looked on it as a medical meeting, a dry, technical lecture, and a good thing to keep away from, but for the personal explanations of, and cards from, their medical friends.

The circuit courts were in session at seven of the appointments and it was feared at first that, on this account, lawyers and court officials would be kept away. In each instance, after consulting the bar, the judge adjourned his court when the hour arrived, after announcing the meeting, and urging its importance. Always the judge either presided at the meeting or took an active part in the discussion. A most gracious and gratifying instance of this kind occurred at Richmond, where the appointment was for the afternoon. A great will case was being tried and attorneys were present from distant parts of our own and other states. Before noon Judge Benton, a great jurist, announced my meeting in his court-room at 2 o'clock, and that court would adjourn at that hour, and urged that all be present to hear matters discussed of the most practical importance to every citizen and family. The result was one of the largest and most appreciative audiences I have ever addressed. Nor was this all. I was to speak in Judge Benton's home city in the evening. He took the train over with me, gave his time to getting his legal and other friends out to the meeting, and took an active part in the discussion there.

THE FOUNDATION FOR THIS WORK.

The professional and public sentiment which made possible the conditions indicated in the foregoing account had resulted from the systematic, patient, persistent efforts of a few devoted men in every county for years, often in the face of difficulties and discouragements which seemed insurmountable. Eighteen years ago the medical law was so defective as to be only an annoyance and expense to reputable men, with practically no restrictions for the vicious classes, as is now the case in most states, and Kentucky was a paradise for quacks. The cities were full of fake medical institutes of every kind, wonder-working cure-alls were announced under alluring headlines and pictures to make monthly visits to most county seats, "for one day only," and nostrum vendors, with music and clog dancers, ridiculed and maligned the profession and fleeced the people; and these were looked on as things only to be endured, as they still are in many states. Under the leadership of a few men in each county, as has been said, the profession was gradually awakened to a realization of its moral and political power, and it was decided that these conditions were intolerable. The physicians got in touch with the leaders of the dominant party in each county, especially with the lawyers and editors, and explained that their work was unselfish; that they only sought to protect the people from ignorant and dishonest pretenders, and to protect the profession from the odium brought on it by these classes. They worked with, and not in antagonism to, these leaders, in the primaries, so that members of the profession of both political parties could act as a unit, and always quietly, not only as becoming to a body of scientific men, but also because the most effective work could be done in this way. Thus in a few years it came about that the 4,100 medical men of Kentucky had more political power than any 25,000 other people in the state, largely because those of every school or system were so united, because it had been proved that they had no selfish ends or ambitions to serve, and quite as much so, probably, because they tactfully worked with and not against the political leaders, used no brass bands or other ostentatious methods beforehand, and indulged in no idle boasts or threats afterward. Doctors, especially country doctors, if they can be aroused to the fact of its possession, and of the importance of its proper exercise, have more moral and political power in the community, and better opportunities

Appointments	Date	Hour of Speaking	Arrive	Route	Leave	Dis-t'nce
Bowling Green ..	April 30	7 :30 P. M.	.....	.....	.....	....
Glasgow	May 1	10 :00 A. M.	7 :40 A. M.	L. & N.	3 :20 P. M.	25
Franklin	2	10 :00 A. M.	7 :01 A. M.	L. & N.	2 :25 P. M.	50
Russellville	3	2 :00 P. M.	7 :35 A. M.	L. & N.	7 :10 P. M.	45
Elkton	4	2 :00 P. M.	8 :59 A. M.	L. & N.	5 :15 P. M.	32
Guthrie	4	7 :30 P. M.	5 :55 P. M.	L. & N.	9 :43 P. M.	11
Owensboro	5	2 :00 P. M.	9 :00 A. M.	L. H. & St. L.	8 :40 P. M.	40
Morganfield	7	2 :00 P. M.	9 :45 A. M.	I. C.	5 :14 P. M.	23
Henderson	7	7 :30 P. M.	6 :05 P. M.	I. C.	8 :30 A. M.	88
Princeton	8	2 :00 P. M.	12 :15 P. M.	I. C.	4 :55 P. M.	47
Paducah	8	7 :30 P. M.	6 :10 P. M.	I. C.	7 :45 A. M.	41
Murray	9	10 :00 A. M.	8 :59 A. M.	N. C. & St. L.	11 :58 A. M.	19
Benton	9	2 .00 P. M.	12 :30 P. M.	N. C. & St. L.	7 :32 P. M.	80
Madisonville	10	1 :00 P. M.	11 :35 A. M.	L. & N.	3 :55 P. M.	80
Hopkinsville	10	7 :30 P. M.	5 :18 P. M.	L. & N.	6 :10 A. M.	36
Elizabethtown ...	11	2 :00 P. M.	11 :35 A. M.	L. & N.	7 :00 P. M.	144
Hodgenville	12	10 :00 A. M.	7 :30 P. M.	I. C.	7 :00 P. M.	11
Bardstown	14	2 :00 P. M.	11 :00 A. M.	L. & N.	6 :08 P. M.	56
Springfield	15	10 :00 A. M.	7 :05 P. M.	L. & N.	12 :00 M.	20
Lebanon	15	2 :00 P. M.	1 :00 P. M.	Drive.	10 :14 P. M.	10
Stanford	16	10 .00 A. M.	3 :50 A. M.	L. & N.	4 :15 P. M.	122
Lancaster	16	7 :30 P. M.	5 :13 P. M.	L. & N.	9 :15 A. M.	62
Richmond	17	2 :00 P. M.	2 :00 P. M.	L. & N.	4 :10 A. M.	110
Winchester	17	7 :30 P. M.	5 :00 P. M.	L. & N.	7 :10 A. M.	16
Mt. Sterling	18	2 :00 P. M.	9 :43 A. M.	L. & N.	4 :10 P. M.	75
Lexington	18	7 :30 P. M.	5 :10 P. M.	C. & O.	7 :05 A. M.	34
Cynthiana	19	10 .00 A. M.	8 :24 A. M.	L. & N.	5 :02 P. M.	14
Paris	19	7 :30 P. M.	1 :45 P. M.	L. & N.	5 :45 P. M.	—
Georgetown	21	2 :00 P. M.	9 :00 A. M.	Interurban.	4 :00 P. M.	31
Versailles	21	7 :30 P. M.	5 :00 P. M.	.....	9 :25 A. M.	24
Somerset	22	1 :00 P. M.	12 :50 P. M.	Q. & C.	3 :08 P. M.	109
Danville	22	7 :30 P. M.	4 :20 P. M.	Q. & C.	5 :30 A. M.	44
Harrodsburg	23	2 :00 P. M.	5 :50 A. M.	Southern Ry.	5 :55 P. M.	18
Lawrenceburg ...	23	7 :30 P. M.	5 :55 P. M.	Southern Ry.	6 :35 A. M.	25
Shelbyville	24	2 :00 P. M.	8 :45 A. M.	Southern Ry.	4 :15 P. M.	15
Taylorsville	24	7 :30 P. M.	7 :15 A. M.	Southern Ry.	6 :10 P. M.	30
Owenton	25	1 :00 P. M.	6 :59 P. M	L. & N.	6 :05 A. M.	17
New Castle	26	1 :00 P. M.	10 :09 A. M.	L. & N.	4 :00 P. M.	72

for bringing it to bear, than all the other learned professions combined, and legislators, judges and other officials, ignorant or dishonest enough, usually the former, to pander to quackery, or to oppose the enactment or enforcement of beneficent measures for the protection to the best interests of the people, soon found themselves retired to private life, where they could think it all over, by an influence with the voters only the more powerful because it was intangible. Still more important, honest, capable officials found that they were supported by the same quiet, confident power, and that an intelligent, fearless discharge of duty made a re-election or promotion easier and less expensive.

Soon the outcome of all this was a new medical law which required every physician in the state to re-register, and which left all the quacks outside of the breastworks; a carefully selected and fearless medical referee in each county, supervised the work and endorsed only reputable applicants, each of whom, as a part of his application, made oath that he had never been an itinerant or advertising doctor, and would never become such, if a certificate were granted him. It was not a stronger or better law than most other states have, but it could be better enforced because it was supported by public sentiment, especially by the legal profession and press, and still more by a medical profession which knew by long training exactly what it was after and how to get it. The quack concerns, the Copelands, K. & K.'s, and others great and small, made a long and desperate legal fight to hold their ground. The board and its individual members were plastered over with fake damage suits, but no inch was ever yielded, no time, concession or exception was even considered, and as soon as the laws could be construed by the courts of last resort, these quacks were driven from our border, and for fifteen years no itinerant or advertising doctor has been permitted to practice longer than was necessary to secure evidence for his indictment and conviction. Of course, this law and the oath referred to do not apply to ethical professional cards.

POLITICAL AND ETHICAL WORK.

This was a semi-political work, and long antedated the reorganization of the profession on the Association plan. This movement was most timely for Kentucky especially, as it gave system, permanency and a solid foundation in the county societies, to a reform which it would have been difficult to maintain otherwise. The State Board of Health, which is also the State Board of Medical Examiners, has always considered itself in effect only the executive committee of the medical societies represented in its membership; it has been strictly a non-partisan organization and, at the same time, paradoxical as it may seem, it is in the closest possible touch with both political parties. In order to make this desirable status a certainty for all time, the law was so amended as to provide, when a vacancy occurs, that the society to which the place belongs should send in three names to the governor, from which list the nomination shall be made. As the three medical members who, with the county judge, and usually the county attorney, compose the county boards of health, and the medical referees, are appointed by the state board, as professional appointments of all kinds are restricted to members of their society, and as most of the influential representatives of all the schools are members of their societies, the practical result has been not only a solid but an active profession back of both the medical and health laws, and of all legislation agreed on. At present the work of the State Board of Health, the State Board of Medical Examiners, the State Medical Association, the *State Journal*, and the surgeon-general are all conducted in the same office. This is a great convenience; it co-ordinates the efforts and makes them more effective, but is being done at a personal sacrifice which may make its continuance impossible for a great length of time. Even before this arrangement was made the policies and work of these bodies were always considered inseparable, and will be so continued under any circumstances.

The osteopathic question gave our profession much serious concern. Under the construction of the courts, the law made no provision for dealing with the matter and the osteopaths had obtained a strong and noisy following in the state before any plan of action could be laid out. The solution reached was not ideal, but it has given entire satisfaction to all concerned. They have a representative on the board, an educated, capable man who insists that the adherents of his system shall come to the highest standards and be held to the most rigid observance of the law. They take the same examination that all other applicants do, an absolutely secret and impartial one, and each of them takes an oath not to attempt to perform operations with the knife, or to administer drugs internally, and the same oath that all others do, not to advertise. Gaining wisdom from our experience in this matter, and knowing of the neuropaths, vitopaths, naturo-practics and similar cults and sects, our law now contains ample provisions for the examination of the adherents of any other system of healing now in existence or which may hereafter be discovered.

As in other states, the question of regulating and raising the standard of medical education, and especially of the entrance requirements of students, has had the serious consideration of the board, the schools and the state association for several years. Recognizing that the responsibility for the old system lay at the door of the entire profession, rather than the schools, as many superficial observers have been led to believe, that many of our best friends, in the best of faith, had invested almost their all of both money and reputation in these institutions, and that the reforms needed must come by evolution and consolidation, and not radically, every possible interest has united. In this work, honest differences of opinion have arisen, as was natural between men of strong character and convictions, who had important interests to guard. The schools often thought that the board was going too fast, and the board was equally sure that the schools were not moving fast enough. It was always found that these differences could be easily adjusted by means of frequent, frank conferences, and that misunderstandings sprang up only when these were omitted. For two years a certificate from the state examiner, elected by the board, has been required for students entering any college in or outside of the state, as a condition of recognition for such college, a rigid but fair examination is required for those without diplomas from recognized high schools or colleges, the economic course recommended by the Council on Medical Education has been made equally obligatory on all schools in or outside of the state, and it is believed that the grade of the examination for license has been equal to that of any other state. Partly as a result of this conservative, helpful policy, probably, four of the schools have recently united into two, giving us three instead of five, and in every way the outlook is encouraging. The same course has been pursued in dealing with the other schools or systems of practice. The representatives of these schools have always been most efficient and cordial co-workers on the board for the highest standards and for every true interest of the entire profession, and, although there has been the most perfect frankness about everything, no sectarian question has ever arisen for discussion.

WORK DIFFICULT AND INCOMPLETE.

If any one should get the impression from what has been said that it has been easy to do any or all of these things, and, with this idea, try to do it in his own state, he would make a great and most unfortunate mistake. If he should get the impression that present conditions in Kentucky are satisfactory and the organization is completed, or half, or a quarter done, he would be still farther from the mark. Each advance, each step forward, has required the united, patient, thoughtful labors of the leaders of the profession in every county, and none know so well as do these devoted men that the work is in its infancy, that we are just getting in a position to meet the responsibilities and reap the benefits of real organization for both the profession and people in a few localities. Postgraduate schools, modest, but practical and effective, have been started in fourteen counties, and others are in contemplation, and joint meetings with the other vocations are being inaugurated. In other counties, with the highest class of men composing the profession, except as to legislation and such matters as the insurance question, which was practically settled in a fortnight, the leaders even have not awakened

to the importance and possibilities of organization, or to what it might be made to mean to them individually. On investigation it nearly always develops that the causes for this are personal, usually between the local men, sometimes because others have attended and gained a prominence in the state work while they remained at home. Exceptionally a few of the leaders, enough to mar the work in their own county, usually the very best of fellows personally and professionally, with only personal and local interests to consider or serve, failing to grasp the broader and more difficult problems confronting those charged with official responsibility for the time being, or not appreciating what has already been accomplished for them, their profession and the state by the very men and policies they condemn, on some suggestion of theirs being refused, with or without good reason, take offense where none was intended, nurse their grievance until it becomes real, and blindly do incalculable mischief, fortunately confined to their own locality and friends, with the same good intentions and cheerfulness as if they were going forward instead of backward.

The only way to meet such difficulties, and all others which confront the profession, most of them from lack of training of students in regard to all these practical matters during the college course, is by practical, persistent, tactful work, never failing good temper, and even-handed justice to every interest on the part of those charged with the responsibility of doing it, and the constant demand that medical schools shall give a practical course in business, ethics and organization, essentials in the every-day life work of the physicians, to future students, or else close their doors. Leading in all this in Kentucky is a devoted, self-sacrificing board of councilors and state society officers excelled by no other state, and back of them, because of what has already been accomplished, is a profession probably more united and enthusiastic on the whole than can be found in any other state. With the headway already gained, under such a leadership, and with such a following everything desirable seems possible unless a slip is made somewhere. Of all things most importance is attached to the fact that the state association, the county societies, the state and county boards of health and every other professional interest, are so dove-tailed and interwoven that all work constantly together for the common good.

A County Society's Work in a Rural District.

Dr. Julius Noer, Secretary of Dane County (Wis.) Medical Society, writes:

"The Dane County Medical Society meets on the second Tuesday of each month in the Carnegie Library at Madison. The membership now includes practically every licensed physician in the county. Not more than two papers can be read at any one meeting. Papers are limited to 20 minutes. This gives ample time for discussion. A commendable fraternal spirit prevails, and the usefulness of the society, both practically and scientifically, is unquestioned. Among the practical things accomplished are: The adoption of a fee bill of minimum charges for the entire county; the adoption of resolutions condemning contract or lodge practice; resolutions prohibiting the demanding or accepting of commissions for referring patients to surgeons or specialists. Insurance examination fees have been fixed at $5.00. The work of our county society shows very clearly that the county organization can be made a very useful body, not only scientifically and clinically, but also as a social center and as an organization for dealing with questions of a purely business nature."

Dane County is a rural community without large cities, but this does not seem to interfere with the work of the society.

To Censor Newspaper Reports.

Resolutions, introduced by Dr. Henry W. Dewey, were adopted at the meeting of the Pierce County (Wash.) Medical Society, held February 19, regarding the publication in the lay press of the description of operations, new treatments, reports of papers read at society meetings, medical interviews, etc., except such facts as will benefit the public, and then not in connection with the names of physicians. The secretary was instructed to preserve, in a scrap-book, the articles or items appearing in the newspapers of Tacoma relating to physicians of the city, and to give out to newspapers only censored reports of meetings.

County societies in Montana are working for the adoption of two bills which have been introduced into the state legislature. The first provides for the establishment of a system of registration of births and deaths, while the second is an amendment to the present law creating the State Board of Health. The registration law is similar to the law on this subject now in force in Pennsylvania.

Society Proceedings

COMING MEETINGS.

Medical Society of Missouri Valley, Omaha, Neb., March 21-22, 1907.
American Association of Anatomists, Madison, Wis., March 27-29.
Med. Assn. of District of Columbia, Washington, April 2.
Tennessee State Medical Assn., Nashville, April 9.
Mississippi State Medical Association, Gulfport, April 10.
South Carolina Medical Association, Bennettsville, April 10.
Medical Assn. of State of Alabama, Mobile, April 16.
Florida Medical Association, Tampa, April 17.
Medical Association of Georgia, Savannah, April 17.

CHICAGO MEDICAL SOCIETY.

Regular Meeting, held Feb. 20, 1907.

DR. C. P. CALDWELL in the Chair.

SYMPOSIUM ON INFLUENZA.

Cardiac, Pulmonary and Gastrointestinal Complications.

DR. JOSEPH L. MILLER said that influenza, probably of all infectious diseases, is one most frequently associated with some cardiac complication. In the epidemic of 1889 and 1890 a large number of cases of cardiac trouble developed in elderly people who were subject to attacks of influenza. The cardiac troubles which frequently arose were those which involved the myocardium. Besides a bradycardia, he mentioned dilatation of the heart, palpitation, and attacks of angina pectoris. The attacks of angina pectoris which not infrequently follow or occur during attacks of influenza are probably due to changes in the coronary vessels and are analogous to those found in diphtheria and scarlet fever.

In young people the prognosis in the cardiac complications of influenza is usually good, as in myocarditis following diphtheria or other acute infections. Recovery is the rule. In elderly people, however, where the heart muscle is undergoing changes as the result of age, or in people who had a previous valvular lesion, an attack of influenza often leads to permanent trouble, and many date their cardiac incompetency from the time of the attack of influenza.

The cough of influenza often occurs in intense paroxysms, almost like whooping-cough, and may persist many weeks even after marked pulmonary signs have disappeared. In the bronchitis of influenza there is a tendency to involvement of the lobes instead of the lungs. Often there is an absence of the diffuse involvement which is found in ordinary bronchitis. The sputum from patients with influenzal bronchitis is fairly typical; it is large in amount, and made up largely of globules of pus about the size of a pinhead.

The croupous pneumonia of influenza is rarely ushered in with a chill; it is more local; it may begin in two or three lobes at the same time, which is unusual in ordinary croupous pneumonia. It does not tend to involve a whole lobe at once, but there occur several foci in the lobe about which infiltration occurs. These foci become larger until they coalesce, and then an entire lobe is consolidated. The sputum is purulent. Over the involved lobe there is much less marked dulness; there is less marked bronchial breathing; less marked bronchophony than in ordinary croupous pneumonia. Consolidation is not as complete. There is much more cyanosis and dyspnea than in ordinary croupous pneumonia, due largely to the associated bronchitis. It is unusual for an influenzal pneumonia to end by crisis. In the majority of cases it ends by lysis extending over two or three weeks from the beginning of the trouble. It is not infrequent to have temperature disappear by lysis, and still there may be marked evidences of infiltration remaining. These cases clear up less rapidly than those of ordinary croupous pneumonia.

Occasionally pleurisy develops (without any evidence of infiltration of the lung) apparently on a bronchitis, and may take on a very rapid and fatal form. The pleurisy may be bilateral, and the patient dies within a few days from rapid filling up of the thorax with sero-purulent fluid.

The presence of a moderate number of influenza bacilli does not establish the diagnosis of influenza. Other factors must be considered.

In speaking of the disturbances of the gastrointestinal tract reference was made to the relation of appendicitis to influenza. The reasons for belief in this relation are, first, the marked increase in the number of cases of appendicitis recognized at the time the epidemic of influenza first appeared. Second, the frequency with which appendicitis occurs in people who suffer from influenza. As to statistics bearing on this subject, Dr. Miller finds in the St. Petersburg General Hospital, taking the month of November during the year 1889, when influenza was epidemic, that there were 917 cases of influenza and 10 cases of appendicitis. In 1890 there were 98 cases of influenza and 12 cases of appendicitis; in 1893 there were 189 cases of influenza and 26 cases of appendicitis; in 1901 there were 323 cases of influenza and 33 cases of appendicitis. In other words, while the number of cases of influenza has been much less than in 1889, the number of cases of appendicitis has been multiplied more than threefold. The statistics of other hospitals were quoted to show the increase in the number of cases of appendicitis following influenza.

Prophylaxis at the present time has been practically unavailing, and treatment must be symptomatic rather than specific.

Complications of the Nervous System, with Treatment.

DR. WILLIAM G. STEARNS said it is certain that more organic and functional disturbances of the nervous system are produced by influenza than by any other acute infectious disease. The reason for this is found in Pfeiffer's bacillus and its mode of invasion, together with the unexplained selective action which the bacillus and its toxin have for nerve tissue. Because of the general debilitating effect on the entire organism, together with its selective and enfeebling action on the nervous system, the functional nervous and mental disorders are most numerous.

Of the prodomal period, the symptoms referable to the nervous system are, first and most constant, pain occurring as headache, backache and myalgia. In extreme cases the pain is excruciating and is occasionally accompanied by such great mental depression as to become overwhelming. The patient lies still, is stupid and unresponsive. This condition may pass into one of coma. The excessive pain may produce the opposite reaction, the patient becoming restless, constantly agitated, making many wild demonstrative and often purposeless movements, and is usually more or less delirious, but rarely becomes maniacal. These symptoms of profound mental and nervous toxemia greatly improve and finally disappear as the temperature rises.

The nervous complications during the course of the disease are either inflammatory or degenerative, or both, that is, due either to the direct invasion of the bacillus or its toxin, or both.

Encephalitis is of two types, the simple inflammatory or hemorrhagic, and the purulent. Simple encephalitis is a rare complication, and due to the direct influence of the bacteria which are more or less disseminated throughout the encephalon, and to the effect of the toxins. The purulent form may be either primary or secondary by extension. A common complication is the result of an invasion of the cerebrospinal membranes occurring usually at the height of the disease. As to pseudomeningitis, symptoms typical of meningitis warrant that diagnosis. A few days later these symptoms disappear, and only those of influenza remain. Myelitis, always acute, may present the symptom group of Landry's paralysis, a compression transverse myelitis, or spastic spinal paralysis. In the last case influenza appears to have selected and injured only the pyramidal tracts.

The nervous complications of convalescence are, aside from the occasional development of abscesses, chiefly toxic, and consist of loss of function or disordered function, or both. The symptoms are distributed in a haphazard manner, having no characteristic grouping. The degenerative changes are chiefly neuritis, and almost every nerve in the body has been affected. There is a tendency, however, to select the cranial nerve.

Of the functional neuroses, neurasthenia, hysteria and epilepsy are the most prominent. Of the psychoses, those of the toxic group are most prominent, and appear in the prodromal stage, disappearing with the rise in temperature or during the febrile stage. During convalescence the exhaustional psychoses occasionally develop.

As to treatment, inasmuch as the primary effect of the influenza toxin on the nervous system is always irritative, opium and bromids are found to be of the greatest use. Calomel and soda, if given with opium, aid the diuretic and hepatic stimulation. Where the wet pack is properly used, its effect is most beneficial.

Treatment of Acute Mastoiditis Due to Influenza.

DR. WILLIAM LINCOLN BALLENGER presented the following conclusions: 1. The reaction of inflammation consists of an increased hyperemia, increased cell nutrition (increased resistance), and an increased migration of leucocytes. 2. The reaction of inflammation is an increased physiologic activity for the purpose of eliminating certain noxious irritants, notably bacteria and their toxins from the tissues. 3. In acute inflammations the reaction of inflammation is usually inadequate to accomplish the destruction of the bacteria and their toxins within a short time. 4. The reaction being inadequate, it should be promoted, and experience has shown such promotion to be effective. 5. In acute otitis medial incision of the ear drum promotes the reaction of inflammation in the quickest and surest way, and thus often prevents destructive processes of this important organ. Incision also provides for adequate drainage, and thus favors the elimination of the bacteria and raises the resistance of the tissues. 6. In acute mastoiditis, leeching, in addition to incision of the ear drum if spontaneous perforation has not already occurred, is the best available means of promoting the reaction of inflammation. Heat followed by a dash of cold water is another effective means of promoting the reaction of inflammation.

He also presented the following mastoid axioms: 1. Tenderness over the mastoid antrum means mastoiditis; that is, apply leeches or heat at once. 2. The way to treat acute inflammation is to increase it; that is, augment Nature's effort to destroy the bacteria and toxins. 3. Leeches to-day may rob the grave. 4. Leeches to-morrow may feed the grave. 5 Do not attempt to kill the germs or you may kill the patient. Promote Nature's processes, and they will do the rest.

Complications Resulting from Infection of Nasal Accessory Sinuses.

DR. H. MANNING FISH emphasized the fact that an accessory sinus disease can give rise to stasis in a more or less remote region. He has found in the literature some eighteen fatal cases of influenza due to an empyema, with cerebral involvement. In a few of the cases the presence of an accessory sinus disease was diagnosticated before death; in the majority of them it was not suspected during life, but only determined at autopsy. In eight cases the cerebral abscess was found to be in the anterior encephalon, on the side corresponding to the accessory sinus disease, showing this location of a brain abscess to be pathognomonic of sinusitis.

Most of the acute cases can be relieved by simple intranasal treatment, even the purulent cases with fever, intense pain, etc. In probing the fronto-nasal canal or the openings of some of the other cavities, one should use no force, as trauma causes an increased swelling of the parts and hemorrhage, with the formation of clots, which may still further close up the openings and aggravate the symptoms. When sinus disease is suspected, the different cavities should be examined, as the finding of an empyema on opening one cavity has led to the neglect of another, which later on caused a fatal termination.

The cerebral and ocular symptoms which either accompany or follow influenza should suggest a sinus disease. Certain symptoms, as vertigo, cephalalgia, optic neuritis and other ocu-

lar lesions that are often attributed to limited meningitis or to brain tumor, may be due to a sinus disease. A recurrent inflammatory condition in the eye that is aggravated by a cold, or is worse in the winter months, suggests a chronic sinusitis. In all cases with cerebral symptoms the accessory sinuses should be examined as well as the ear. Sinus disease should not be excluded on account of a negative nasal finding, or by the absence of pain, either spontaneous or on pressure.

DISCUSSION.

DR. THEODORE TIEKEN said that patients with tuberculosis do not bear influenzal infections well. The fatalities among tubercular patients are greatly increased by the presence of influenza bacilli. Hubermann has never been able to find the bacillus of influenza in the circulating blood, although he has made over 400 examinations. In influenza the pharyngeal margins are deeply injected, and the upper portion of the uvula is very anemic. He has never seen pharyngeal paralysis as a complication of influenza, but he has noticed irritable bladder in many cases. Microscopic examination disclosed a catarrhal cystitis. He mentioned a young girl suffering from influenza who urinates every ten or fifteen minutes.

DR. ADOLPH GEHRMANN called attention to the wide distribution of the bacillus influenza. It is relatively easy to find it on mucous surfaces and in pus that has recently formed. Apparently this bacillus dies when the pus remains for any length of time, and we have probably the effect of the influenza bacillus through its toxin from disintegration. He has found it on every mucous membrane in the body.

DR. ALMERIN W. BAER deprecated the frequent use of coal-tar preparations in influenza, because nothing is more debilitating. Physicians should recommend the discontinuance of the coal-tar preparations because of their injurious effects.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

One Hundred and First Annual Meeting, held in Albany, Jan. 28-30, 1907.

(*Concluded from page 823.*)

Technic of Ablation of the Breast.

DR. PARKER SYMS, New York, stated that modern methods of removing cancer of the breast are far in advance of the older ones, and that although much more extensive and radical they are done in a way that causes less shock and risk to the patient. Permanent cures are far more frequent than under the old régime and the death rate from operations is very low. Doctor Syms prefers the method of Dr. Willy Meyer to all others, as it is anatomic, never atypical, and if done properly it is bloodless. The blood vessels are all cut out at their trunks and not at their small branches. A half dozen to a dozen artery clamps suffice. It takes from one hour to an hour and a quarter to complete the operation. The lymphatics and veins are removed from above downward and not in the direction of their current, and the carcinoma is not cut into. There should be no shock and the patient may be out of bed in forty-eight hours. This operation does not impair motion and the functions of the arm and the blood circulation of the arm are seldom impaired.

Surgical Treatment of Goiter.

DR. MARTIN B. TINKER, Ithaca, said that the slow development of alarming symptoms of goiter as well as its infrequency in this country has made all concerned ready to temporize with this affection. The operation may be done under local anesthesia. A visible scar can be avoided by transverse incision. Placing the incision between the branches of distribution of the superficial cervical and supraclavicular nerves makes local anesthesia simple. To avoid injuring the nerve supply, it is well to divide the sternothyroid and thyroid group of muscles high up. The personal experience of the author has been highly satisfactory as to results and he has had no deaths. Operation should be urged as soon as it becomes evident that palliative measures are not effective.

Clinical Observations in Intestinal Obstruction.

DR. JOSEPH C. BLOODGOOD, Baltimore, said that intestinal obstruction was by no means a common disease, there being only 106 cases on record in Dr. Halsted's clinic, and in a large clinic in Germany only 70 cases were recorded in 20 years. The general practitioner usually sees these cases first, and he should be impressed with the necessity of operating within 48 hours. The mortality of operations done 48 hours after the onset is about 70 per cent., while the mortality for operations done within 24 hours is 30 per cent. It is sometimes difficult to recognize the beginning of intestinal obstruction within so short a time. Any patient who has pain enough to require the use of morphin, if the pain is not in the region of the kidney or bladder and not followed in a few hours by watery stools, might be presenting a beginning obstruction. He divided these cases into two groups: Strangulation in which the lumen is not only obstructed but the circulation interfered with, and obduration, in which the lumen is blocked but there is no interference with the circulation. In the first the symptoms are more acute and immediate operation is demanded. Whenever the patient suffers acutely from abdominal pain, initial vomiting and shock, he advised against the use of morphin, recommending enemata and washing out of the stomach.

Etiology of Mechanical (Surgical) Constipation.

DR. SAMUEL G. GANT, New York, said that in considering the etiologic factors of constipation the mechanical causes are often overlooked and the trouble attributed to the better known causes. In this class of cases no matter how much time is spent in trying to educate the patient and improve his general condition, it is impossible to secure the desired result until the obstruction is removed. To accomplish this it is usually necessary to resort to some operative measure. The following are the most frequent mechanical causes of constipation: Congenital deformities, which occur oftener in the rectum and at the anus than elsewhere in the gut; extra-intestinal pressure, from tumors, cysts, inflammatory disease, etc., outside the bowel and which cause constipation by compression; strictures; malignant and non-malignant neoplasms; foreign bodies, either swallowed or formed within the gut; fecal impaction. The author has treated 45 such cases. The masses removed varied in weight from four ounces to 12 pounds.

New Operation for the Radical Cure of Femoral Hernia.

DR. A. V. MOSCHCOWITZ, New York, makes an incision in the inguinal region, and converts the femoral into a direct inguinal hernia. The sac is then ligated or sutured in the usual manner, and so high up as to obviate the formation of a peritoneal dimple. The internal femoral ring is closed by suturing Poupart's ligament to Cooper's ligament and to the periosteum of the pubic bone. The subsequent steps are those of the Bassini operation for inguinal hernia. The advantages of this operation are that it can be performed with ease and facility and it is particularly adapted to cases of strangulation. Since May, 1905, the author has operated on 20 cases, all of which have been kept under continuous observation, and thus far there has not been a recurrence.

Other Papers Read.

The following papers were also read: "Etiology of Cancer in the Light of Recent Laboratory Advances," by Dr. H. R. Gaylord, Buffalo; "Experimental Research in Connection with the Transplantation of Carcinoma in Mice," by Dr. G. H. A. Clowes, Buffalo (See THE JOURNAL, Jan. 5, 1907, p 15); "Chloroma with Special Reference to the Ocular Symptoms," by Drs. S. C. Merrill and A. J. Bedell, Albany; "The New York State Medical Library," by Dr. A. Vander Veer, Albany; "State Aid for Medical Libraries," by Dr. S. Baker, Utica; "Sahli's Desmoid Reaction," by Dr. H. C. Carey, Troy; "Abortive Treatment of Pneumonia," by G. L. Curtis, New York; "The Visions of Mary Czajka," by Dr. F. E. Fronczac, Buffalo; "Clinical Features and Operative Treatment of Thyroid Affections," by Dr. G. E. Beilby, Albany; "Importance of Routine Examination of Urine for Indican," by Dr. J. D. Olin, Watertown; "Casuistry of Foreign Bodies in the Uterus," by Dr. B. S. Talmey, New York; and "Treatment of Ventral Hernia," by Dr. T. B. Spence, Brooklyn.

Therapeutics

Scarlet Fever.

(*Concluded from page 830.*)

COMPLICATIONS.

Scarlatinal Nephritis.—The treatment of this complication must be first directed toward its prevention, chiefly by the persistent use of large drafts of water, liquid diet (milk to be preferred), carefully administered hydrotherapy, and protection against cold during the whole course of the disease. Heubner of Berlin, in "Modern Clinical Medicine," advises desisting from active treatment so long as the amount of urine does not fall below 500 or 600 c.c.. Milk diet is to be continued, varying with buttermilk. The food requirements of the body are to be completely supplied. Besides milk, lukewarm drinks may be given (lemonade, tea) or some alkaline mineral water, but if at all possible there should be no other food substance so long as a sufficient quantity of milk can be taken. In those cases in which milk can not be administered, which are not frequent, the food should consist mainly of vegetables, wheat bread with butter, dried or fresh vegetables, fruit soups, cereals, fruits. Many of these substances may be prepared with milk and will be taken by those who reject pure milk. Small quantities of milk may be taken frequently instead of large quantities at one time.

As soon as the secretion of urine falls below 400 c.c., active measures are necessary. Heubner believes that during the acute stage every measure should be taken to prevent irritation of the kidney. He avoids even mild drug diuretics and depends on foods and drinks. The skin should be kept active by means of sweating. The best method consists in placing the patient in a warm bath, 95 F., gradually increasing the temperature to 100.5 F., for from 10 to 15 minutes, and following this by dry or moist packs. In cases in which fever is present the sheets may be dipped in cool water so that heat may be withdrawn at the same time and the bath made cooler. The patient is allowed to remain one-half hour in the pack after profuse perspiration has appeared in the face. Then the covers are gradually removed, the skin is dried with warm cloths, and the patient is placed in the bed, which has been previously warmed. This process is only to be carried out once or twice daily. If sweating is not produced even after a hot drink then small doses of pilocarpin internally appear to be but slightly if at all dangerous. The following may be given at the onset of the pack

℞. Pilocarpinæ hydrochloratis.....gr. ¾ |04
Aquæ dest. .....3xxv 100|

M. Sig.: Two teaspoonfuls may be given to a child from 6 to 10 years of age.

This author states that blood-letting is especially desirable in cases with symptoms of intoxication, headache, vomiting, etc. One or two leeches are applied to the renal region. The leech itself withdraws about 10 grams of blood, and if with two leeches, therefore, a similar quantity (from 15 to 20 grams) flows from each wound, this is of advantage. Soon afterward, in favorable cases, the secretion of urine rises again, and headache and nausea disappear. Occasionally venesection may be made and 100, 150, or, in older children, 200 grams of blood may be withdrawn. This may be followed by a subcutaneous injection of a normal salt solution, 100 to 150 grams.

Cotton recommends the use of the following drugs, especially in patients with weak pulse, combined as follows

℞. Potassii acetatis
Potassii citratis, āā.....gr. xcvi 6|
Infusi digitalis q. s. ad.....℥iii 90|

M. Sig.: A teaspoonful every four hours to a child from 5 to 10 years old. Follow each dose with half a tumblerful of water.

Scarlatinal Rheumatism.—Heubner states that the less severe cases may be treated by rest and keeping the affected joints warm. In the more severe cases he has had the best results by the use of the salicylates with no deleterious effects on the kidneys. Of the preparations of salicylic acid he has found the following to be the mildest and most pleasant:

℞. Aspirin (acetyl-salicylic acid).....3i 4|

Divide in eight powders and direct one powder to be taken at 2, 4 and 6 o'clock in the afternoon.

Scarlatinal Typhoid.—This complication should be treated in the same manner as a mild attack of enteric fever. The drug which Heubner thinks especially efficacious for this complication is quinin.

Hyperacidity of the Stomach.

Bardet, in *Bull. Gen. de Therapeutique,* calls attention to the effects of increased hydrochloric acid secretion in the stomach, and to the rational treatment of this condition by alkalies to the point of saturation. The following powders are effective for this purpose; they are of two kinds, one to be taken at once after a meal, the other several hours later, as occasion may arise:

℞. Sodii bicarbonatis
Magnesii oxidi, āā.....3i 4|
Calcii carbonatis præcipitati
Sacchari lactis, āā.....3iss 6|

M. Ft. chartæ No. x. Sig.: Take one powder immediately after each meal, with a little water. The dose may be increased or diminished, according to the case.

℞. Magnesii oxidi .....gr. xxv 1|60
Calcii carbonatis præcipitati
Bismuthi subnitratis, āā.....gr. xii |80
Sodii bicarbonatis.....gr. xv 1|
Sacchari lactis .....3ss 2|
Codeinæ .....gr. ss |03

M. Ft. charta No. i. Sig.: Take in a little water at the time of the attack of pain.

Fresh Air.

W. Gilman Thompson, in the *Medical Record,* discusses the fresh-air problem in hospitals. Air may be fresh and not necessarily cold, and becomes a very important part of the treatment in a large variety of diseases. Fresh air is not a specific for any one disease, but increases the resisting power of the individual. Thompson gives the following conclusions for the betterment of ventilation in this cold and changeable climate:

1. Ward heating and ward ventilation should be capable of independent adjustment at all times.

2. The night temperature of the ward should be at least 5° F. below the noon temperature, which latter should not be above 68 F. or 70 F.

3. The ward windows should be furnished with transoms and one or two movable separate panes, to admit of easy regulation and ventilation.

4. No window should be so heavy that it can not be handled readily by the nurse.

5. The ward should be in communication with balconies or porches, on which the patients' beds can be moved through windows of the casement type. Such balconies need not interfere with the adequate lighting and ventilating of the ward, as proved at Bellevue and other hospitals in which they have been used.

6. The building of very large wards should be discouraged and a greater number of small adjacent rooms should be provided to admit of the scientific adjustment of the ventilation and temperature to suit the requirements of different patients.

7. The windows of the ward, even on the coldest day, should be opened at least twice daily, in the early morning and late afternoon, for a few minutes, to change thoroughly all the air in the room. During this time any patient may be covered temporarily with extra bed-clothing if there be fear of exposure from draft. The same procedure should be carried out immediately after visiting hours.

8. Day rooms should be provided for convalescents where they can obtain change of air and scene, and leave more fresh air for the bedridden patients in the wards.

9. The ward should have at least one accessible heater, where patients sitting up temporarily may gather and warm their feet if they desire.

10. It is entirely unnecessary to have all the ward windows precisely alike, except from some fanciful esthetic standpoint. Thus certain windows of the casement type should spring from the floor and open on to balconies. Obviously heaters of the ordinary height can not stand in front of these windows.

Windows should be grouped with more reference to sunlight exposure, ordinary wind exposure, etc., than is usually done.

11. House staff and nurses should not only be taught ventilation theoretically, but made to put it into practice in the wards, and should be made to regard fresh air as of equal importance with fresh food.

Where these simple common-sense principles are in daily practice it is possible to use fresh air as a definite therapeutic measure and to secure most gratifying results. Finally, Thompson emphasizes the fact that air temperature and ventilation are not synonymous terms.

Reaction of Digitalis Infusion.

J. Löwy (*Wien. klin. Wochschr.*) after investigating the influence of acids on the activity of digitalis infusion, concludes as follows:

1. A digitalis infusion is in all cases weakened by hydrochloric acid of the concentration of the acid in the gastric juice. The presence of pepsin is without significance. The same action is exerted on a solution of hellebore of a concentration of 0.25 per cent., but a strophanthin solution is uninjured by a high percentage of hydrochloric acid.

2. Even allowing a digitalis infusion to stand at room temperature for twenty-four hours is sufficient to reduce its active strength to one-half.

3. This latter effect is due to the action of organic acid present in the infusion and can be prevented in most cases by neutralization.

It is desirable, therefore, to reject ready-made infusions of digitalis, and it would be preferable for the physician to secure a freshly made infusion.

Medicolegal

Practice of Medicine by "Doctor" Applying Nerve Food—Not Question for Experts—May Ask as to Ingredients—Charter No Defense.

The Supreme Court of Rhode Island says in the case of State vs. Heffernan that the words "practice of medicine," as used in Chapter 165 of the general laws of that state of 1896, must be construed to relate to the practice of medicine as ordinarily and popularly understood. If the acts shown by the evidence amounted to the practice of medicine, as meant by the statute, the defendant was not protected by his claim of ignorance of any or all of the learning which is necessary for the safe and successful treatment of disease, or by his disclaimer or assumption of any kind or number of titles. A person who testifies that he is not a medical doctor, and states that he never attended a medical school or took any course of studies in medicine, but claims to be a doctor of dermatology and physical education by virtue of an Institute of Dermatology and Physical Education, formed by himself and others under the law relating to incorporation, and who also adds the title "nerve specialist," by some authority not disclosed, is still amenable to the law and capable of practicing medicine in violation of the provisions of the statute.

One witness in the case, who went to the defendant with her nephew, William Buckley, said that the defendant examined him: "And I don't know what you would call it, something to test your lungs with, with a strap around him, and he said he was very badly with consumption, and I don't really remember whether he did anything to him that day or not, but he gave him some medicine to bring home, and he told me that it would cost me $100 to get him cured, and he said he would cure him in three months, have him so that he would be able to work in three months' time, and he charged me $4 for the first four bottles of medicine I got." She said William Buckley went to the office three times; that the defendant stripped him every time, and one time he put some stuff in his ear, and gave him some stuff to put in his mouth, and rubbed him around the chest and ears with this medicine; that he gave him medicine to take home to drink; that he did not go to the house, but said he would if it was necessary; that she went to the office five times; that she got 16 bottles of nerve food in all and paid the defendant $16. That the defendant told her the rule that when he made any special treatment in the office it was $1 extra.

Another witness, Margaret Ryan, testified that she had a skin disease; that the defendant salved her body with this food; that after the treatment he said he could cure her and that he didn't see how he could afford to do it at less than $5 for the massaging and the food; that she went to the office until she had received 25 treatments, for which she paid him $5 a treatment, amounting in all to $125. She then stopped going to his office. She said: "The last treatment I took at his office he had to use something in my ears. The next day I was in a critical condition. I was not able to go to his house so I was obliged to send for him to come to see me at my home. He came there and brought some medicine and treated me there, my head and shoulders, and I was not able to go to his office any more. He made three visits there."

A police officer testified that he went to the defendant's office and asked him if he was Dr. Heffernan, and he said he was; that he asked him if he had any nerve food and he said he had; that he showed him three different bottles and asked what was the matter with him; that he told him he had catarrh; that he then took him into a side room, had him strip off to the waist, examined him on the lungs and chest, took his chest expansion, showed him three bottles, Nos. 1, 2, and 3, and said if he would take No. 3 bottle and rub it on his forehead, back of his neck, and nose, it would kill the catarrh; that he asked the price and the defendant said it was $1, and he paid him $1.

The defendant testified, among other things, that he was a doctor of dermatology and physical education; denied that he had ever practiced medicine or held himself out as a medical doctor, and said that he had never applied to the board of health for a certificate. When asked if he had any authority for the practice of dermatology and physical education, he said: "I have a certificate from the state in the form of a charter." He then introduced a certificate of the Secretary of State that certain persons, of whom the defendant was one, "have filed in the office of the Secretary of State, according to law, their agreement to form a corporation under the name of Heffernan Institute of Dermatology and Physical Education, of the United States of America, for the purpose of promoting, teaching, and practicing the science of dermatology and physical education according to the principles developed and taught by Thomas J. Heffernan, the inventor of nerve food, aiding and caring for sick and infirm people, especially those afflicted with consumption and similar loathsome nervous diseases, encouraging temperance, and such other habits as tend to the physical health, long life, and happiness of mankind, in accordance with law, and have also filed the certificate of the general treasurer that they have paid into the general treasury of the state the fee required by law." He testified that he had been engaged in life insurance about eleven years, as agent in part, and president; that prior to that he had been in the market and grocery business; that he had no medical education, never attended any medical school, or took any course of studies in medicine; that he discovered the nerve food about five years ago; that it was composed of herbs and fruit entirely; that the nerve food also contained neuzoid, which was made from grasses imported from Japan and other places; that he discoverd the use of neuzoid in connection with the other ingredients. The defendant further testified: "Q. You notice in your handwriting, '25 treatments at $5, $125.' You yourself have used the word 'treatments,' and it is written in there in your own handwriting; why did you use that word? Ans. That means the amount of food that was used on her. Q. You mean that the word 'treatment' was the proper word used when you meant so many ounces of nerve food? Ans. Yes. . . . Q. In connection with your profession you do use the title 'Doctor,' do you not? Ans. I do. . . . Q. What significance does that word 'Doctor' have? Ans. Nothing more than teacher. Q. You used the word in your direct examination as 'general practitioner;' general practitioner of what? Ans. Dermatology and physical education." As to the treatment of Mrs. Ryan, he testified that he sold her the "food" and rubbed it on her head and body, and on one occasion put some in her ear; that he used at one time 8 ounces, and other times 16 ounces at a treatment; that the "food" was worth 75 cents an ounce.

As to William Buckley, he testified: "I had him remove his clothing on the upper part of his body, including his shirt. I took some nerve food and applied it to his body, showed him how he might use it at his house. I gave him a lesson in breathing. He was unable to take any air into his lungs. His chest was entirely neutral. I explained to him how to breathe, and I assisted him to take some pus from his nose, got him so that, the second time he called to the office, he was able to expand his chest from nothing to three inches. He was a great deal improved in his health at the time he left off treatment."

The court is of the opinion that the acts of the defendant shown in the evidence amounted to the practice of medicine in violation of Chapter 165 of the general laws of 1896, as amended by Chapter 926, of the public laws of 1900-1901.

A physician was asked the cross-questions: Do you consider the selling of nerve food to constitute the practice of medicine? If a person should buy a bottle of this nerve food and employ some one to rub it on the body, would you consider that to be the practice of medicine? Objections to these questions were sustained, and the court holds the ruling correct. It says that the opinion of the witness as to what constituted the practice of medicine was clearly immaterial.

The cross-question was also asked the defendant: "What is the ingredient of this nerve food outside this one particular ingredient?" The defendant's counsel objected, on the grounds: (1) That, while the state had the right to prove the ingredients by its witnesses, if it could, it had not the right to find out from the defendant. (2) That the state had not the right to inquire into the composition of the nerve food, because it was the private property of the defendant. The trial court said: "The first ground is not tenable, in my opinion, because, if the defendant takes the stand, he is compelled to testify in regard to any proper question. It is his privilege not to take the stand if he sees fit to avail himself of it, but, if he does take the stand, he must answer in regard to any pertinent inquiry. The second point is that this is private property, and in my opinion that is a consideration which is secondary to the public consideration of the right to know what he has been giving. The mere fact that he claimed a secret process does not, in my opinion, relieve him from the duty of answering a proper question, in cross-examination, as to what he has administered, and I sustain the question of the Attorney General and note your objection thereto." The Supreme Court holds that the ruling of the trial court was correct.

The trial court was requested to charge as follows: "Defendant is authorized by charter to promote, teach, and practice dermatology and physical education, and to aid and care for sick and infirm people, especially those affected with consumption and similar nervous diseases. He can not be convicted of practicing medicine illegally if he did nothing beyond what he was given the right to do under said charter. A person who uses neither drugs, medicine nor surgery can not be said to engage in the practice of medicine." This request, the Supreme Court says, was properly refused. The charter gave the defendant personally no authority to do anything, and what the corporation was authorized to do was, by the very terms of the certificate, to be done "in accordance with law."

The defendant, in order to lawfully practice medicine in Rhode Island, the Supreme Court further says, would be obliged to obtain a certificate from the state board of health. That portion of the request reading, "A person who uses neither drugs, medicine nor surgery, can not be said to engage in the practice of medicine," was properly refused, as it was not applicable to the evidence in the case, and assumed that the nerve food was not medicine. It had been shown that the defendant used nerve food of varying strength, that he claimed that the nerve food was used to supply the capillary nerves of the entire body, and that it was very good for all ailments. The definition of medicine, in State vs. Mylod, 20 R. I. 643, would certainly include a remedial substance having the qualities claimed by the defendant for nerve food. If the defendant prescribed or administered something which he claimed was good for the alleviation of pain, or the cure of disease, it would not avail him to show, by way of defense, that what he so administered did not have the remedial qualities which he had claimed for it. The statute was intended to protect the public from pretense and sham, as well as from ignorance.

Expert Evidence and Duty to Reduce Damages.

The Supreme Court of Washington says that in the personal injury case of Rowe vs. Whatcom County Railway & Light Co. and others, the principal issue at the trial was whether the plaintiff had curvature of the spine as a result of other injuries received. Prior to the trial, the court appointed three physicians to make a physical examination of the plaintiff, at the request of the defendants, who afterward called them as witnesses.

Error was assigned to a ruling sustaining objections to the following questions propounded to one of the physicians appointed by the court, in the course of his cross-examination: "Q. You have been paid by the defendant street railway company for making this examination? Q. How much does the street railway company pay you for testifying in these cases, Doctor, over and above the regular lawful fees provided by law?" But the Supreme Court holds that no error was committed here. It says that while the witness was appointed by the court, he became a witness at the instance of the defendants, and they were obligated to pay, not only his fees as a witness, but reasonable compensation for making the physical examination of the plaintiff. The fact that the witness had been paid for his services at the time of the trial was immaterial and irrelevant. The second question propounded did not present the question which the plaintiff sought to raise in this court. The question assumed that the witness had testified for the defendant company in other cases, and inquired what he was paid for so doing. That question was irrelevant and immaterial in this trial, and whether it would have been competent to inquire what the witness was paid in the case on trial this court would not decide, as no such question was presented in the record before it.

The next error assigned was in a ruling sustaining objections to the following questions propounded to a medical witness called by the plaintiff in rebuttal: "Q. I will ask you to state to the jury whether or not that is a proper test to be applied to this plaintiff in this case, taking into consideration his physical condition and all the other questions that have been suggested concerning his confinement to the house, the fact that he has only been on his feet a portion of the time? Q. I will ask you to tell the jury whether or not the test just made, on laying the plaintiff on his abdomen on the table, in the manner in which it has just been done, was a fair test in this case on the question of curvature that is under consideration before this jury? Q. I will ask you to tell the jury in this case whether or not the laying of the plaintiff on the table on his abdomen and face, pushing the left shoulder down, pulling the right shoulder up, for the purpose of changing the position of the spine, if possible, by getting the shoulders as nearly square as it was possible to have them placed in that position, whether that is a fair test on the question of curvature as presented to the jury in this case?" The reason assigned by the trial court for its ruling sustaining objections to these questions was that the question whether the tests applied by the witnesses for the defendant were fair or proper was for the jury. In this the trial court, the Supreme Court holds, erred. It says that the witness was asked his opinion on a matter involving scientific and technical knowledge, not within the experience of the ordinary witness or jury, and should have been permitted to answer. Certainly the ordinary juror is not qualified to determine whether any given test will disclose the presence or absence of curvature of the spine without the aid of expert or opinion evidence. Nor was there any merit in the claim that the testimony was not proper in rebuttal. While the witness had already testified that the plaintiff had curvature of the spine, stating fully the reasons for his conclusion, yet he was asked nothing concerning the test afterward applied by the defendant's witnesses, and the plaintiff could not be and was not required to anticipate the tests that might be resorted to.

The jury was instructed: "In arriving at the amount of his damages, you are to say, not only what they are, but whether the means used by the plaintiff to reduce the damages were such as an ordinarily prudent man would use. You can

not say that he should or should not have obtained any particular kind of treatment. As to that, he must alone be the judge. But when he has determined what treatment to take, it will be for you to say if in making that determination he used the means that a reasonably prudent man would take to cure himself of his injury, or to reduce the extent thereof under the same circumstances. If you find that he did not, and you can say that some other treatment would have brought about a cure or reduced the amount of his damages, and that that treatment was one that a reasonably prudent man would have adopted, then you must say that he has not used the care which a reasonably prudent man would use to reduce the damages, and you must take that into consideration in arriving at your verdict, and you fix the standard as to what a reasonably prudent man would do under such circumstances." This instruction, the Supreme Court says, did not, as contended by counsel, hold the plaintiff responsible for the results of his physician's treatment. It simply exacted of him that degree of care which a reasonably prudent man would exercise under the same circumstances, and such this court believes to be the duty imposed by law.

Services of Nurse During Childbirth Necessary.

The Appellate Term of the Supreme Court of New York says that the case of Schneider vs. Rosenbaum was brought by the plaintiff to recover for services as a nurse to the defendant's wife during childbirth. The wife engaged the nurse at $10 a week. During all this time an action for separation was pending between the defendant and his wife; the wife being the plaintiff. It also appeared that the defendant was paying his wife $5 a week, and he contended that he was not liable for the services of a nurse because he and his wife were living apart. But the court holds that the services rendered were clearly necessaries for which the nusband might be held liable, notwithstanding their living apart.

Physical Examination and Privilege Waiving.

The First Appellate Division of the Supreme Court of New York says that in the case of Geis vs. Geis, the plaintiff sought a decree annulling his marriage with the defendant on the ground of her physical incapacity to enter into the marriage state. After the defendant had interposed an answer in which she denied the allegation, the plaintiff moved for an order requiring her to submit to a physical examination. On the hearing of that motion the defendant showed that she had already submitted to such an examination by three physicians who attended her and who were competent to testify, and she insisted that she should not again be submitted to the indignity of a further examination, as abundant evidence upon the subject of her condition could be given by those physicians. The motion was denied on condition that the defendant should stipulate to waive the provision of section 834 of the New York Code of Civil Procedure, and consent that such physicians, or any of tnem, by whom she had been theretofore examined, might testify as to her physical condition. Accordingly such a stipulation was signed by the defendant and acknowledged by her.

The provision of section 834 of the Code prohibits a physician from disclosing information acquired in attending a patient in a professional capacity and necessary to enable him to act in that capacity. But by section 836 of the Code it is provided that a patient may waive this right of secrecy by making such waiver in open court on the trial of the action or proceeding. It is also provided that a paper executed by a party prior to the trial regarding such waiver shall be insufficient for such a waiver, but that the attorneys for the respective parties may, prior to the trial, stipulate as to such waiver, and the same shall be sufficient therefor. The attorneys did not stipulate in this case. Consequently, the court does not deem the waiver sufficient. It says that it sees no reason why another physical examination should be required in this case, but the order should be modified so that there could be no question at the trial as to the sufficiency of the waiver. Therefore, in addition to the stipulation appearing in the record, the order should require that the attorneys for the defendant should sign the stipulation in accordance with the provisions of section 836 of the Code referred to.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.
February 23.

1 *Brachial Neuralgia and Arm Pains. C. L. Dana, New York.
2 *Treatment of Acute Diffuse Peritonitis. R. Douglas, Nashville, Tenn.
3 *Koch's Emulsion of Bacilli in the Diagnosis of Incipient Thoracic Tuberculosis. W. Meyer, West Hoboken, N. J.
4 *Observations on an Ideal Local Anesthesia for Submucous Resection. E. E. Miller, New York.
5 *Treatment of La Grippe. P. J. McCourt.

1. **Brachial Neuralgia.**—According to Dana, brachial neuralgia is by no means a rare disease. Among 197 cases of neuralgia, occurring in his practice, there were 41 cases of brachial neuralgia. This affection is seen more frequently in women, particularly women of the leisure classes. Dana suggests that this may be due in part to non-use of the arms, and he advances the theory that the arms of these modern women are becoming quasi-vestigial, like the appendix, the jejunum and the last molar tooth. There is often a predisposing neurotic or rheumatic taint and sometimes autotoxemia. Exhaustion from occupation or trauma is also a cause. Pain in the arm and shoulder usually is the only subjective symptom. Dana has not found the treatment of this condition of any avail without rest. This is secured by a sling and, if necessary, by splints. In a good proportion of cases some relief was obtained by use of the salicylates, but they must be given in large doses. Neither massage nor hot baths should be given at first.

2. **Treatment of Acute Diffuse Peritonitis.**—Douglas concludes that peritonitis is not always the same disease; that many factors, chiefly bacteriologic, determine its onset, course and ultimate termination, and that, therefore, there is no one treatment for peritonitis; no method applicable alike to all cases. He disapproves of irrigation because it disseminates infection and removes the phagocytic cells. He employs gauze to coffer-dam the field of operation, and much of the fluid in the abdominal cavity will be absorbed by this gauze packing. Such fluid as comes within easy reach should be taken up with gauze pads, but the forcible thrusting of gauze sponges between intestinal coils is condemned. Placques of fibrin on the intestines, he states, should be left undisturbed. When quantities of foreign matter are disseminated throughout the peritoneal cavity Douglas employs irrigation; otherwise not. When evisceration is necessary he thinks enterostomy and emptying of the intestines through a Paul tube is the proper thing. He says that drainage of the general peritoneal cavity is physiologically impossible, and that the discharge from the drain is largely due to the irritation of its presence. Douglas does not believe in the Ochsner treatment nor in the Fowler position.

3. **Tuberculin in Diagnosis of Tuberculosis.**—Meyer cites the histories of 28 cases of incipient tuberculosis to show the value of the bacillary emulsion for diagnostic purposes. He considers it a most valuable means of determining an early tuberculosis which could not be discovered positively without that means.

4. **Local Anesthesia for Submucous Resection.**—Miller uses a mixture made by placing from 20 to 25 grains of cocain crystals in a shallow dish and dropping in sufficient adrenalin chlorid solution, 1-100, to dissolve the crystals. The solution is appplied with a cotton applicator. The anesthesia lasts about three-quarters of an hour.

5. **Treatment of Influenza.**—Arsenic, in alcoholic solution, 1-800, given in 5-minim doses, morning and evening, is said by McCourt, to be a most efficient prophylactic against influenza. From 3 to 5 minims of the tincture of the fresh root of gelsemium, in 6 ounces of water, given in dram doses, every one to three hours, is considered by McCourt practically a specific for almost every step, stage and variety of influenza when free from serious early complications.

New York Medical Journal.

February 23.

6 *Intestinal Perforation in Typhoid. J. A. Blake, New York.
7 *Subinvolution as a Primary Etiologic Factor in Gynecologic Affections. J. H. Burtenshaw, New York.
8 *Trypsin Treatment of Cancer. J. W. Luther, Philadelphia.
9 Differential Diagnosis of Dilatations and Deep Diverticula of the Esophagus. S. Kelen, Karlsbad.
10 *Gonorrheal Epididymitis. A. A. Uhle and W. H. Mackinney, Philadelphia.
11 Common Disabilities of the Foot. J. P. Fiske, New York.
12 *Fallacy of So-Called Rapid Diagnosis of Rabies. N. G. Keirle, Baltimore.
13 *Use of Live Steam in Local Treatment of Infection. F. Griffith, New York.

6. Intestinal Perforation in Typhoid.—Blake says that the physician who makes a correct diagnosis of perforation and calls in the surgeon should receive a greater measure of credit than the latter, even if the operation is successful. Results show that at least one-fourth of the patients suffering from intestinal perforation can be saved by operation. His experience has been that all the patients who are not operated on die, so that the surgical treatment of this perforation is productive of very good results. The percentage of recoveries would be even greater if a diagnosis of perforation were made soon after its occurrence.

7. Subinvolution as a Cause of Gynecologic Affections.—Burtenshaw claims that fully 50 per cent. of female affections are directly or indirectly due to subinvolution of the generative organs, and that a very large majority of these may be prevented by proper treatment during the puerperium. Burtenshaw does not encourage the use of the obstetric binder after the end of two or three days. He never makes use of a pad beneath the binder, nor does he insist on the patient lying flat on her back, but encourages her to assume the most comfortable position possible. She is allowed to sit up in bed, propped up by pillows, on the third or fourth day, but is not allowed to put foot to the floor until the expiration of at least two weeks. Her breasts are emptied at regular intervals, by the child or by the breast pump. Lacerations of the pelvic floor or perineum should be repaired within 24 hours. He advocates the administration of ergot early and often—in 15-minim doses, thrice daily, after meals, for a period of at least six weeks. Hot water vaginal douches, twice daily, body massage, static electricity and strict observance of personal hygiene are also of importance.

8. Trypsin Treatment of Cancer.—Luther recalls that of the cases thus far reported as having been treated with trypsin only five patients have been pronounced cured, and that in not one of them has the microscope corroborated the clinical diagnosis. It is evident, however, that the treatment produces a shrinkage of the growth, improvement in the general nutrition, diminution or cessation of pain, and diminution in the discharge, with a decrease of fetor, except in those cases in which sloughing occurs. Luther says that if this treatment is perfected it will be by the finding of methods of obtaining purer and more concentrated solutions of the ferments so that they can be administered in reasonable amounts.

10. Gonorrheal Epididymitis.—A study of 264 cases of epididymitis made by Mackinney shows that this complication occurred in 16 per cent. of patients suffering with gonorrhea. In treatment the best results are obtained by the application of a saturated solution of magnesium sulphate, in conjunction with elevation of the scrotum. After the acute symptoms are relieved an ointment composed of equal parts of the ointments of belladonna and mercury, together with the same quantity of ichthyol ointment, 10 per cent., and lanolin, should be employed to hasten the absorption of the exudate.

12. Rapid Diagnosis of Rabies.—Keirle summarizes his paper as follows:

1. The presence of ganglionic changes, described by von Gehuchten and Nelis, or the presence of the structure termed Negri bodies, is not pathognomonic of rabies (hydrophobia), since these are often found when rabies does not exist.

2. The absence of one or both of these appearances does not prove that rabies is absent, since they may be present when rabies is absent and absent when rabies is present; therefore they are not infallible indications of rabies (hydrophobia).

3. In the exigency of treatment, the results of preliminary examinations should not be waited for. When the circumstances are suspicious, when the animal has been killed or has escaped, when a person has reason to think that he has been in contact with the virus of rabies (hydrophobia), he should, as soon as he can, consult his physician, and, preferably through him, should at once communicate with some reputable institution treating this disease preventively, and abide by the advice given.

13. Live Steam in Treatment of Infection.—It seems practical to Griffith to employ live steam projected into the abdominal cavity through a median incision as a means of combating general septic peritonitis, the indication of shock as well as sepsis being met by this means. In the treatment of local infections Griffith's plan of action is to apply a light, fluffed gauze dressing held in place by use of as few as possible turns of a roller bandage. If drainage openings are to be preserved a loose twist of rubber tissue is employed. Elevation of the part affected by slinging or otherwise is always insisted on as being of as much importance as anything which can be done for the patient. Frequent applications of heat by immersion of the bandaged part into the hot water as often as ten or twenty times a day in serious cases, and allowing it to remain submerged for from half a minute to five minutes at a time. The patient always reports that he is able gradually to increase the temperature and the time of the immersions. Rapid evaporation takes place after each dip, so that if examined five or ten minutes after one of the treatments the parts will be found quite dry.

Boston Medical and Surgical Journal.

February 21.

14 Relationship of the Physician to the Public Need. C. J. Blake, Boston.
15 *Decrease of Infectious Diseases. J. H. McCollom, Boston.
16 Medical Inspection in Schools. R. W. Lovett, Boston.
17 *Case Simulating Cirrhosis of Liver Due to Carcinoma of Kidney and Vena Cava. C. F. Witherington, Boston.
18 *Pyelitis Complicating Pregnancy. J. B. Swift, Boston.
19 *Pyelitis in Pregnancy and the Puerperium. F. S. Newell, Boston.
20 *Case of Pyelitis During Pregnancy. C. H. Hare, Boston.

15. Decrease in Infectious Diseases.—McCullom attempts to show what has been done in the past few years toward the diminution in the frequency of the three principal infectious diseases, namely, diphtheria, smallpox and scarlet fever. The author emphasizes the great importance of isolation, careful medical inspection of the children in the schools, and the establishment of isolation hospitals. He says that in order to accomplish much in the suppression of infectious diseases there should be cordial cooperation of physicians, health officers and the public, and that the health officer should be specially trained for his duties. Special instruction should be given in medical colleges for health officers.

17. Carcinoma of Kidney and Vena Cava.—Witherington reports the case of a man, 56 years of age, who complained of considerable digestive disturbance, nausea, vomiting, constipation, dyspnea, ascites and edema of the legs. In view of the absence clinically of evidence of sufficient disease, either of heart or kidneys, to account for the great edema, and because of the presence of portal obstruction, a large liver, dilated veins and strongly alcoholic history, a diagnosis of cirrhosis of the liver was made. At the postmortem there was found a carcinomatous growth of the right kidney with carcinomatous occlusion of the inferior vena cava, the right renal vein and the proximal portion of the left renal vein. The original site of the carcinoma seemed to be the right kidney.

18. Pyelitis Complicating Pregnancy.—Swift has seen three cases of pyelitis complicating pregnancy, one of which he reports in full. He has found 40 cases reported in the literature. In his collection of 41 cases, there were 15 primiparæ, 14 multiparæ, not mentioned 11. The right side was affected 37 times and the left 4. Twenty-eight patients went to full term. Spontaneous premature labor occurred four times, premature labor was induced once and in nine cases, the pus having disappeared from the urine, the patients passed from observation. Nephrotomy was done once antepartum, four times postpartum. The colon bacillus is reported 17 times, no bacterial examination being recorded in the rest.

19. **Id.**—Newell cites the histories of five cases, in all of which the right kidney was involved primarily and both kidneys in two cases.

20. **Id.**—Hare reports one case of pyelitis occurring during pregnancy. The patient was carried through the pregnancy successfully, and had a normal and easy labor and a normal convalescence.

St. Louis Medical Review.

February 16.

21 Premeditation in Inebriety. T. D. Crothers, Hartford, Conn.
22 *Ethyl-Chloride-Ether Sequence. W. E. Leighton, St. Louis.
23 *Chloroform Anesthesia. M. B. Clopton, St. Louis.
24 *Complications Following Anesthetics. E. L. Apperson, St. Louis.

22. **Ethyl-Chlorid-Ether Anesthesia.**—This combination of anesthetics is considered an ideal one by Leighton for effecting general anesthesia.

23. **Chloroform Anesthesia.**—Clopton says that while chloroform is definitely indicated in some cases, he prefers ether because the patient runs less risk, and there is little more, if any, discomfort when ether is given by the open-drop method.

24. **Complications Following Anesthesia.**—Apperson reviews what is known of the complications following the use of anesthetics, and discusses the methods usually employed to prevent their occurrence.

The Journal of Medical Research, Boston.

December.

25 Methods for Testing the Indol Reaction. E. N. Tobey, Boston.
26 The Cholera-Red Reaction and the Indol Reaction. Id.
27 The Uricolytic Enzyme in Animal Organs. A. E. Austin, Boston, Mass.
28 *Non-virulent Diphtheria Bacilli from an Infected Middle Ear. E. N. Tobey, Boston, Mass.
29 Influence of Subcutaneous Injection of Liver Extract on the Hepatic Catabolism of Uric Acid. L. B. Stookey, Los Angeles.
30 *Modification of Bacillus Dysenteriæ After Cultivation in Agglutinating Serum. H. T. Marshall and J. H. M. Knox, Jr. Baltimore.
31 *Chemistry of Atheroma and Calcification (Aorta). L. K. Baldauf, Albany.
32 *Distribution of Treponema Pallidum, Schaudinn (Spirochæta Pallida), in the Tissues in Congenital Syphilis. O. T. Schultz, Cleveland, Ohio.
33 *Effect of Amyl Nitrite Inhalations on the Blood Pressure in Man. A. W. Hewlett, San Francisco.
34 *Parathyroid Glandules in Paralysis Agitans. R. L. Thompson, St. Louis.
35 *Resistance of the Red Blood Corpuscles of the Horse to Salt Solutions of Different Tonicities Before and After Repeated Withdrawals of Blood. T. Smith and H. R. Brown, Boston.
36 Hemorrhagic Hepatitis in Antitoxin Horses. P. A. Lewis, Boston.
37 *Diphtheria-Toxin Paralysis in the Guinea-pig. P. A. Lewis, Boston.
38 *Lesions Caused by Trichina Spiralis in Man. C. Frothingham, Jr., Ann Arbor, Mich.
39 Hemoflagellates of an African Fish (Clarias Angolensis). J. E. Dutton, J. L. Todd and E. N. Tobey, Boston.
40 Notes on *B. coli* in Drinking Water. D. Rivas, Philadelphia.

28. **Testing Indol Reaction.**—Tobey describes bacilli isolated from an infected ear, with the morphologic characteristics of diphtheria bacilli, but non-virulent to guinea-pigs and without any effect on mannite.

30. **Modification of Dysentery Bacilli.**—Marshall and Knox show that dysentery bacilli cultivated in specific and normal serum become inagglutinable and lose the power to unite with agglutinin. The exact mechanism of this apparent acquired immunity to agglutination is discussed without reaching any final conclusions.

31. **Chemistry of Atheroma and Calcification.**—Baldauf's results corroborate those of Wells, namely, that in pathologic calcification the inorganic salts are deposited in approximately the same proportion as in normal ossification. The formation of calcium soaps, which Klotz claims plays an important part in calcification, was not demonstrated. Baldauf suggests that the large amount of lecithin in early calcification and the fall in lecithin as the calcium content rises may be explained on the score that the phosphate radical is derived from decomposition of lecithin.

32. **Treponema Pallidum in Congenital Syphilis.**—Schultz corroborates recent observations on the distribution of *Treponema pallidum* in the tissues in congenital syphilis. He declares that the microbe is to a marked degree an intracellular parasite, glandular epithelium being especially invaded. The connective tissue formation is regarded as due partly to destruction of parenchymatous cells, partly to stimulation of connective tissue cells. The microbes multiply chiefly in the perivascular lymphatics and in the tissues, but not in the larger blood vessels. In this way is explained syphilitic periarteritis.

33. **Effect of Amyl Nitrite on Blood Pressure.**—Hewlett shows that the typical action of amyl nitrite is not that usually given to it, namely, dilatation of the peripheral arteries and fall of pressure, but rather an increased total output of blood from the heart so that there is a more rapid flow through the dilated vessels.

34. **Parathyroids in Paralysis Agitans.**—There was no alteration demonstrable by morphologic methods in the parathyroids in nine cases of paralysis agitans studied by Thompson, and hence there is no anatomic basis for the hypothesis that paralysis agitans is a chronic progressive hypoparathyroidismus.

35. **Resistance of Red Corpuscles to Salt Solution.**—Two facts are prominent in the observations of Smith and Brown, namely, individual variation in resistance and a marked stability in this variation. Hence statements in regard to lowered resistance and the like of human corpuscles do not mean anything definite until individual and racial variations in health have been worked out. In the horse normal variation may be quite as great as any assignable to disease. Consequently statistical observations among human beings in temperate as well as tropical climates are very desirable.

37. **Diphtheria Toxin Paralysis.**—Lewis found that amyloid change in the liver and less frequently in the spleen is caused, in a majority of the horses, by the routine treatment with diphtheria toxin and repeated bleeding extending over three years. These horses are very subject to hemorrhage into the liver and rupture with hemorrhage into peritoneal cavity. Of direct practical bearing is the observation that if horses are not bled more than five liters per 1,000 pounds each three and one half to four weeks they may be kept for a long time as antitoxin producers.

38. **Trichina Spiralis Lesions in Man.**—Frothingham found trichina embryos in the sinuses of the mesenteric lymph nodes and in the liver capillaries, thus showing that they enter by the lymph stream and are distributed by the blood. He also found embryos in hemorrhagic areas in the lungs and local destruction of tissue in the liver, pancreas, brain and heart due to embryos breaking through the vessels.

Maryland Medical Journal, Baltimore.

February.

41 *House Disinfection and Reinfection. W. R. Stokes and W. P. Stubbs, Baltimore.

41. **House Disinfection and Reinfection.**—Stokes and Stubbs show the results obtained by use of formaldehyd gas in room disinfection after communicable diseases and demonstrate the effect of this gas on test cultures. The reinfection of houses following disinfection is also considered. Although disinfection alone is not depended on to prevent the spread of communicable diseases, the authors believe that in combination with other means it is useful in limiting their spread. They collected statistics from 5,546 cases of diphtheria and scarlet fever. In 2,807 cases of diphtheria in Baltimore, followed by formaldehyd disinfection after the throats of all members of the household were declared free from diphtheria bacilli, there occurred during the same year 65 reinfections, or 2.35 per cent. In 2,739 cases of scarlet fever, followed by formaldehyd disinfections (not less than 21 days after official report of the case to the Baltimore city health department), there were 69 reinfections or 2.55 per cent. In 1,769 of the above diphtheria disinfections there were 40 reinfections where they obtained the result of the control cultures. Three of these were positive, showing the disinfection for some reason (construction of room, etc.), was technically defective. Thirty-one were negative, showing a thorough disinfection, and six were either missing, sent back empty or were broken in transit. In 1,721 of the scarlet fever disinfections there were 47 reinfections, of which they obtained the result of the control cultures. Seven were positive, 32 were negative and 8 were missing or empty. In 1,850 of the diphtheria cases from which the authors have

been able to gather this information there occurred 47 reinfections (2.54 per cent.).

Journal of the Minnesota State Medical Association and the Northwestern Lancet, Minneapolis.

February 1.

42 *Significance of Delirium in Typhoid. H. A. Tomlinson, St. Peter, Minn.
43 Glenard's Disease. G. D. Head, Minneapolis.
44 Fourth of July Casualties and What Can Be Done in Minneapolis Toward Their Suppression. F. C. Todd, Minneapolis.
45 *Accidental Perforation of the Uterus During Surgical Manipulation. H. B. Sweetser, Minneapolis.

42. **Delirium in Typhoid.**—According to Tomlinson delirium in typhoid is primarily the evidence of instability in the higher functions of the brain, and the character of the delirium will be dependent on the degree of this instability. Its persistence is not necessarily the result of the formation of toxins but rather is due to the fact that these irritant substances are not eliminated. This accumulation of toxins is principally due to insufficient renal function. Therefore, Tomlinson says, the delirium is not only significant of the involvement of the nervous system, but is also by its activity and persistence, an indication of the gravity of the prognosis.

45. **Accidental Perforation of Uterus.**—Sweetser reports two cases. One patient was curetted under chloroform anesthesia after a supposed miscarriage. A dilator was inserted and opened, an Emmett curette forceps was then passed into the uterus, its jaws separated, closed and withdrawn. In the bite of the forceps was found a bulky membranous mass which was at once recognized as bowel. The tear in the uterus was situated in the posterior wall of the cervix. Sweetser emphasizes the following points:

1. The uterus has not always a firm, thick wall, capable of withstanding rough treatment.
2. Perforation of its wall is by no means infrequent.
3. Its position and size should be determined in every case before manipulations are undertaken within its cavity.
4. Rigid asepsis should be maintained in all cases.
5. Any force in the introduction of instruments used in manipulation is absolutely inadmissible.
6. If perforations occur, any intrauterine manipulations should at once be suspended.
7. The subsequent treatment will depend on the amount of damage done.
8. Irrigation is dangerous.

California State Journal of Medicine.

January.

46 *A Combination of Syphilis and Epithelioma of the Tongue. D. H. Montgomery and H. M. Sherman, San Francisco.
47 *Diagnosis of Some Lung Conditions Requiring Surgical Intervention. G. H. Evans, San Francisco.
48 The Social Evil and Its Cost and Control. G. H. Aiken, Fresno.

46. **Syphilis and Epithelioma of Tongue.**—The interesting points in Montgomery's case are the combination of two important diseases such as syphilis and epithelioma in the same lesion, and the elicitation of an interesting history of unsuspected syphilis. The syphilis evidently had been contracted during the patient's first pregnancy, although it could not be ascertained how the infection occurred. Both the patient and her husband denied all knowledge in the case. All the children of the patient showed numerous evidences of hereditary syphilis.

47. **Lung Surgery.**—In connection with the discussion of the surgical treatment of abscess of the lung, Evans reports a case of abscess following pneumonia occurring in a man, 45 years of age. An operation was done and the patient made an uneventful recovery.

West Virginia Medical Journal, Wheeling.

February.

49 Dishonesty in Foods and Drugs. R. J. Reed, Wheeling.
50 Pneumonia. F. B. Murphy.
51 Gallstones, Etiology, Diagnosis and Treatment. S. M. Mason, Clarksburg.
52 Prejudice. C. H. Maxwell, Morgantown.
53 Stricture of Male Urethra—Suggestions as to Surgical Treatment. H. B. Stout, Parkersburg.
54 Rupture of the Intestine. W. W. Golden, Elkins.
55 *Ethics of the Medical Specialist. T. W. Moore, Huntington.
56 Typhoid Fever at Davis Memorial Hospital. T. J. McBee, Elkins.

55. **Ethics of Medical Specialists.**—Moore believes that with the excellent training that is now given in medical colleges the general practitioner will be more successful in differentiating serious from trivial cases, and that with the confidence born of knowledge he will act when emergencies arise with the result that only diseases requiring special appliances or extraordinary skill for their treatment will be referred to a specialist. This will deter men from taking up specialties who have not had the preliminary training as well as the superior opportunities necessary to enter these chosen fields.

Chicago Medical Recorder.

February 15.

57 *Method of Graduated Removal of Inferior Nasal Turbinal. H. Gradle, Chicago.
58 *Hemorrhoids: Their Treatment Under General and Local Anesthesia. J. R. Pennington, Chicago.
59 The Doctor in Practical Sociology. W. D. Byrne, Chicago.
60 Drug Habits. W. F. Waugh, Chicago.
61 Gymnastics in Treatment of Spinal Curvature. C. Westman, Chicago.
62 Various Modes of Locomotion for the Physician. J. M. Dal, Chicago.

57. **Removal of Inferior Nasal Turbinal.**—Gradle describes a motor-driven trephine working within a guard for sharp spines on the nasal septum, and for resection of the interior turbinal. The essential part of the apparatus is the guard, a brass tube 8.5 cm. long with an internal diameter of 7 mm. Twenty-five mm. beyond the front end of the tube one-half of its circumference is cut off, leaving thus a semi-cylindrical shell. The use of this apparatus is described in detail.

58. **Hemorrhoids.**—Pennington presents a general review of the treatment of hemorrhoids, discussing particularly the technic of the anesthesia to be employed for operative intervention. He states that local anesthesia conduces to a much more rapid recovery than does general anesthesia, although it can not be employed in every instance.

Ohio State Medical Journal, Columbus.

February 15.

63 *Difficult Diagnosis of Bright's Disease. J. Eichberg, Cincinnati.
64 Medical Inspection of Public Schools as a Factor in Prevention of Disease. S. O. Barkhurst, Steubenville.
65 The School Girl from a Hygienic Standpoint. J. Fraunfelter, Canton.
66 *Where We Skid. P. L. Myers, Toledo.
67 Stricture of the Urethra. T. G. Youmans, Columbus.
68 Diagnostic Value of Pain. H. R. Geyer, Zanesville.
69 Examination of the Eyes of 1048 East Cleveland School Children. L. K. Baker, Cleveland.

63. **Diagnosis of Bright's Disease.**—Eichberg reviews the difficulties ordinarily encountered in attempting to diagnose disease of the kidneys and urges the importance of thorough, systematic and careful clinical study in every case.

66. **Where We Skid.**—Myers' paper is a rather facetious dissertation on the general subject of cleanliness and the shortcomings of the profession in materia medica and etiology.

Journal of the Kansas Medical Society, Lawrence.

February.

70 *Acute Exfoliative Dermatitis. H. H. Bogle, Pittsburg, Kan.
71 Skin Grafting. H. H. Heylmun, Hutchinson, Kan.
72 Superstition in Medicine. T. C. Hinkle, Emporia.
73 *Maxwell Method of Treating Intracapsular Fractures of the Femur. O. D. Walker, Salina.
74 The Roentgen Ray and Its Uses. M. H. Bacon, Kansas City.
75 Cholecystitis. J. T. Axtell, Newton.
76 Hypopyon Keratitis. A. C. Graves, Pittsburg.
77 *Gangrene of the Skin. E. Smith, Lawrence.
78 *New Method for Treating Retroflexion. F. A. Harper, Pittsburg.

70. **Acute Exfoliative Dermatitis.**—Bogle reports a case of this kind occurring in an infant nearly two months old. Treatment proved unavailing. The baby died at the age of four months.

73. **Intracapsular Fracture of Femur.**—Walker says that for efficiency in the treatment of intracapsular fractures the Maxwell method stands alone as the most rational and most successful yet offered to the profession. The treatment was first described by Dr. Maxwell about 35 years ago.

77. **Gangrene of Skin.**—Smith reports the case of a little girl, aged 19 months, who was suddenly taken ill with vomiting, diarrhea, tenesmus, fever and convulsions. On the following day a small blister was found on the right natis. This spread rapidly until it covered the right buttock, extending to the left. There appeared four blisters on the back and one

on the thumb of the right hand. These blisters increased in size considerably, became dark red in color, livid in the center. The patient died on the third day.

78. **Retroflexion of Uterus.**—To reduce a posterior displacement of the uterus Harper puts the patient in the knee-chest position and introduces in the anterior fornix a tightly rolled piece of absorbent cotton of requisite size, tied at each end with a cord, which he calls a cotton pessary. To reduce an anterior displacement the patient assumes the dorsal position and the cotton pessary is placed in the posterior fornix and used as a fulcrum to straighten out the flexion. One hand in the rectum and the other over the abdomen or in the vagina and a special uterine repositor assist in restoring the position of the organ.

Journal of the Michigan State Medical Society, Detroit.

February.

79 *Puerperal Insanity. H. Ostrander, Kalamazoo.
80 *Cesarean Section. History of Successful Case. C. H. Rodi, Calumet.
81 *Therapeutic Value of Rectal Tampons. J. A. MacMillan, Detroit.
82 *Gastrointestinal Conditions in Pernicious Anemia. H. A. Freund, Ann Arbor.
83 *Significance of the Term "Itch" in Some of the More Common Pruriginous Affections of the Skin. A. P. Biddle, Detroit.
84 Traumatic Lesions of the Eye with Special Reference to their Effect on the Cornea. H. R. Conklin, Tecumseh.

79. **Puerperal Insanity.**—At the Michigan Asylum for the Insane the number of cases of puerperal insanity admitted during a period of ten years ending November, 1906, was 63, or 3.9 per cent. of all the admissions. Ostrander analyzes 30 cases, of which 9 were gestational and 21 postpartum. All the patients were married; four were under 20 years of age; 16 between 20 and 30; 9 between 20 and 30, and one was 40 years of age. Of the puerperal cases the symptoms began immediately after confinement in 6; in one week in 4; in two weeks in 4; in three weeks in 1; in four weeks in 1; in five weeks in 1, and in six weeks in 4. The onset was sudden in 10 cases, gradual in 17 cases, and unknown in 3 cases. Fourteen patients had insane and neurotic relatives; only 9 had negative family and personal histories. Four were cases of delirium due to septicemia; 4 were cases of confusion and depression due to toxemia; 10 were manic depressive cases of the depressed type; 8 were manic depressive cases of the manic type, and 4 were cases of dementia præcox. Recovery occurred in 16 cases (4 of these patients have had subsequent attacks not associated with puerperium); 2 were improved; 10 remained unimproved, and 2 patients died. The recoveries occurred at varying periods, from five weeks to fifteen months.

80. **Cesarean Section.**—Rodi reports a case of Cesarean section done during the eighth month of pregnancy on a woman whose conjugate diameter was 1¾ inches. Both mother and child lived.

81. **Value of Rectal Tampons.**—MacMillan considers the rectal tampon a very useful agent to stimulate intestinal peristalsis and to improve the muscular tone of the bowel. He has used rectal tampons in a large number of cases of chronic constipation with most gratifying result. The tampon is placed above the rectal valves and is allowed to remain in this position for three or four hours. The tampons are composed of cotton, lamb's wool or gauze. They are inserted through a proctoscope.

82. **Gastrointestinal Conditions in Pernicious Anemia.**—The causes of pernicious anemia as they are understood to-day are touched on briefly by Freund. He says that of 53 patients, 54 per cent. complained of loss of appetite; 38 per cent. of bad taste in the mouth, due largely to poor teeth; 46 per cent. of nausea and vomiting; 54 per cent. of epigastric distress; 24 per cent. of diarrhea, and 10 per cent. of constipation. Freund insists that a careful gastric analysis and an examination of the intestinal contents be made in all these cases as a means of instituting appropriate treatment.

83. **Itch.**—Biddle divides this affection into the following groups: 1. Verminous parasitic diseases. 2. Vegetable parasitic diseases. 3. Bacterial parasitic diseases. 4. Secondary bacterial infections. 5. Pruriginous papular dermatoses. 6. Pruriginous sensory neuroses.

Cleveland Medical Journal.

February.

85 Histology of the Thyroid in Simple and Toxic Exophthalmic Goiter. D. Marine, Cleveland.
86 Some Causes of Hematuria. W. E. Lower.
87 Effects of Hot, Humid Atmospheres on the Animal Body. J. J. R. Macleod and J. D. Knox.
88 Experimental Glycosuria. J. J. R. Macleod and C. E. Briggs.

Journal of the Missouri State Medical Association, St. Louis.

February.

89 Treatment of Gastric Ulcer. F. E. Murphy, Kansas City, Mo.
90 Abdominal Injuries. H. C. Dalton, St. Louis.
91 Collection of Human Embryos in the Anatomic Laboratory of the University of Missouri. C. M. Jackson, Columbia.
92 Non-lithogenous Obstruction of Biliary Ducts. A. H. Cordier, Kansas City, Mo.
93 The Physician and the Association as Seen by the Country Doctor. J. B. Norman, California, Mo.

The Canada Lancet, Toronto.

February.

94 Psychoses and Neuroses of Urethral Origin. N. E. Aronstam, Detroit, Mich.
95 Medical Thoughts, Facts, Fads and Fancies. J. S. Sprague, Stirling, Ont.
96 Case of Acute Phlegmonous Gastritis. J. J. Mackenzie, Toronto.
97 Intestinal Obstruction. A. A. Macdonald, Toronto.
98 Carbonate of Creasote in the Treatment of Pneumonia and Bronchopneumonias of Childhood. A. Fletcher, Toronto.

Wisconsin Medical Journal, Milwaukee.

January.

99 Pathologic Basis for a Rational Curative Treatment of Malignant Disease of the Breast. J. L. Yates, Milwaukee.
100 *Diagnosis and Treatment of Injuries to the Eye. G. E. Seaman, Milwaukee.
101 *Tuberculosis Sanatoria and Treatment. C. A. Harper, Madison.
102 Symptoms and Diagnosis of Aortic Aneurism. L. F. Jermain, Milwaukee.

100 and 102.—See abstracts in THE JOURNAL, July 14, 1906, page 144.

Journal of the Arkansas Medical Society.

January 15.

103 Use of Formaldehyd Solution in Cure of Epithelioma. L. Kirby, Harrison.
104 Interesting Cases in Minor Operations. E. K. Williams, Arkadelphia.

Western Medical Review, Lincoln.

January.

105 Practical Points on Radiotherapy. A. Schalek, Omaha, Neb.
106 The Truth About the Sharp Curette. W. O. Henry, Omaha.
107 Secondary Inflammation Following Appendicitis. C. C. Allison, Omaha.
108 Nervous Eructations and Pneumatosis. A. O. Peterson, Omaha.
109 Importance of Early Diagnosis in Cancer of the Rectum and Sigmoid. R. D. Mason, Omaha.

Central States Monitor, Indianapolis.

February.

110 Various Gross Pathologic Conditions of the Urethra Revealed by the Urethroscope. N. E. Aronstam, Detroit.
111 Eyestrain. S. C. Norris, Anderson, Ind.
112 Case of Abscess of the Prostate. G. Link, Indianapolis.
113 Open-Air Treatment of Pneumonia. W. T. S. Dodds, Indianapolis.
114 Foreign Bodies in the Bronchi. W. Schell, Terre Haute, Ind.

Iowa Medical Journal, Des Moines.

February 15.

115 Chairman's Address, Section of Mental and Nervous Diseases, Iowa State Medical Society. J. M. Barstow, Council Bluffs.
116 Dementia Paralytica. R. Moon, Clarinda.
117 *Manual Training for Medical Students and Instruction in the Principles of Psychotherapy. G. H. Hill, Des Moines.
118 Cough: Its Varieties and Their Treatment. G. F. Butler, Chicago.
119 A Few Points on Gallstones. L. W. Littig, Iowa City.
120 Medical Education and Some Needed Legislation. E. Hornibrook, Cherokee.

117.—See abstract in THE JOURNAL, July 28, 1906, page 306.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal.

February 9.

1 *Toronto Hospital for Advanced and Far-advanced Cases of Tuberculosis. W. H. Broadbent.
2 *Retrospect of a Thousand Consecutive Cases of Abdominal Surgery. J. Swain.
3 *Claim of the Surgeon to Conduct the After-treatment of Operation Cases. C. A. Morton.
4 *Dissemination of Intra-abdominal Malignant Disease by Means of the Lymphatics and Thoracic Duct. W. M. Stevens.
5 *Temperature in Malignant Disease of the Liver and Bile Passages. J. W. Russell.
6 *A Pair of Forceps in the Abdominal Cavity for Ten and a Half Years. J. E. F. Stewart.

1. **Tuberculosis.**—Broadbent describes the Toronto Hospital for Advanced Cases of Tuberculosis, which was built at the instigation of the Association for the Prevention of Consumption.

2. **Abdominal Surgery.**—The 1,000 cases reported by Swain include 101 operations on the ovaries and tubes, 75 on the uterus and broad ligaments, 127 for hernia, 229 for appendicitis, 49 for diseases of the liver, gall bladder and bile ducts, 65 on the kidney, 126 for diseases of the stomach and intestines (excluding hernia and appendicitis), 29 on the urinary bladder and prostate, and 24 for tuberculous peritonitis and peritoneal adhesions. Some of the comments made by Swain are particularly interesting. For instance, he invariably puts a double ligature on all structures in the abdomen and pelvis that have been ligatured before being cut away, the second ligature being applied after the division of the tissues. He does not advise the removal of all myofibromatous tumors of the uterus, as he thinks more lives will be saved by a judicious selection of cases for operation. In young women Swain chooses myomectomy, provided that the general condition of the patient is fairly satisfactory, that the tumor does not extend much above the umbilicus, and that there are no important complications, such as severe inflammatory disease of the tubes and ovaries or advanced anemia. In cases in which myomectomy is undesirable, he prefers the operation of retroperitoneal hystero-myomectomy. When the myofibroma is associated with malignant disease he removes the uterus and tumor. For cases of cancer of the uterus that are diagnosed early he believes that colpo-hysterectomy is the best operation, although in some cases abdominal hysterectomy must be resorted to.

Swain is not convinced of the desirability of performing cholecystectomy as a routine measure in the operative treatment of cholelithiasis. He thinks that recurrence of the gallstones after operation is rare. He has not seen a case. He has not performed cholecystectomy except for carcinoma of the gall bladder, permanent blocking of the cystic duct, and in an atrophic gall bladder which could not easily be dealt with in any other way.

Speaking of nephropexy, he says that when belts fail operative measures are indicated in healthy adults in whom a freely mobile kidney is associated with symptoms of gastric crises or of torsion of the renal vessels. He claims that of those cases of movable kidney that do give rise to symptoms distinctly referable to the renal mobility, probably at least two-thirds are better treated by some form of belt than by operative fixation. For the radical cure of hernia Swain prefers a modification of Kocher's method for the ordinary run of cases, Bassini's method being reserved for large hernias of old standing with a widely dilated external ring. In the performance of intestinal resection Swain prefers the use of a simple suture to that of mechanical appliances; Halsted's quilt suture is his choice. In stomach surgery he always performs the posterior operation of gastrojejunostomy. When the duodenum can be freed, Kocher's lateral gastroduodenostomy is the routine measure. Frank's method of gastrostomy is the one usually adopted by Swain when that operation is indicated.

3. **After Treatment of Operation Cases.**—Morton claims that the operating surgeon should be allowed to conduct his own after treatment whenever possible. He also discusses an important detail of the after treatment of abdominal operations —the position of the patient, and one complication which may be very serious—flatulent distension. He says that in all cases in which drainage of any quantity of fluid from the abdomen is desired the patient should be kept in the half-sitting position, the position that is sometimes spoken of as Fowler's position. He thinks it very important that the patient should not turn himself or raise his shoulders until the time he is allowed out of bed, because the latter movement, at any rate, is just the one to interfere with healing or to stretch a weak scar.

4. **Dissemination of Intra-abdominal Malignant Disease.**—The objects of Stevens' paper may be summarized as follows:

1. To point out that the lymphatic glands above and under cover of the left clavicle are much more frequently involved in intra-abdominal malignant disease than is generally recognized, and that this may be demonstrated in some cases (when the glands are not palpable) by percussion over the clavicle or in the infraclavicular region. In other words, the glandular enlargement which can be clinically demonstrated is not necessarily only "supraclavicular."

2. To show that the thoracic duct—and to a very much lesser degree the right lymphatic duct—plays a most important part in the dissemination of intra-abdominal malignant disease, either by acting as a carrier of infective material or by being itself directly involved.

3. To attempt to demonstrate that the secondary infection of different parts in cases of malignant abdominal disease can be explained on anatomic grounds.

5. **Temperature in Malignant Disease of Liver.**—Russell claims that nearly two-thirds of the 52 cases of malignant disease of the liver and bile ducts studied by him showed some degree of pyrexia, at any rate, in the later stages. Fourteen cases of uncomplicated malignant disease of the liver showed no abnormality of temperature beyond a tendency to drop below the normal level. Twenty-five similar cases showed some degree of pyrexia. Of 13 cases in which the growth arose from some part of the bile passages, only three presented a normal temperature chart. The termination of the case does not appear to bear any relation to the temperature.

6. **Forceps in Abdominal Cavity.**—In the case reported by Stewart the forceps were lying in the pelvis, the handles being directed forward and upward. Though the patient's health had been wretched during the 10½ years, and a large part of this time was spent in bed, she occasionally felt well enough to participate in dances. Her chief symptoms during these years were sudden acute pain, constipation alternating with diarrhea, and pains in the lower limbs. At the operation the forceps were found inside the lumen of the bowel.

The Lancet, London.
February 9.

7 Diagnosis and Localization of Cerebral Tumors. C. E. Beevor.
8 *Portal Cirrhosis of the Liver. D. Duckworth.
9 *Affections of the Lachrymal Apparatus. S. Stephenson.
10 *Sarcoma of the Scapula in a Child Aged Four Years. L. B. Rawling.
11 *Fibroids of the Uterine Cervix. J. R. Morison.
12 *Appendicitis in Typhoid Fever. C. Leedham-Green.
13 *Sanitary Condition in Relation to Infantile Mortality. T. Divine.
14 Rôle of the Blood Plasma in Disease. H. Campbell.

8. **Portal Cirrhosis of Liver.**—Duckworth reviews briefly the clinical history of this affection. He states that surgical intervention is indicated only in the early stage of ascites, and only then if the general state of the patient is satisfactory, and when treatment by potassium iodid and one or two tappings have failed to benefit the condition.

9. **Affections of Lachrymal Apparatus.**—In this very complete discussion Stephenson considers the anatomy, physiology and diseases, including their treatment, of the lachrymal gland and its duct.

10. **Sarcoma of Scapula.**—The case reported by Rawling was one of primary sarcoma of the body of the scapula. The general condition of the child was not very favorable and the tumor was so extensive and was growing so rapidly that operative intervention was out of the question. Rawling reviews 23 recorded cases of sarcoma of bone occurring in children under 9 years of age; adding to these 36 other cases grouped by other writers, Rawling found that 40 of the patients died at an early age (some of these cases were inoperable), while 19 recovered from the operation. One patient is known to be well several years after the operation. The ultimate result in the other 18 cases could not be determined. It is evident, therefore, that surgical procedures are generally useless unless the diagnosis is made early and the patient is operated on at once, the tumor being removed freely and widely.

11. **Fibroids of Uterine Cervix.**—The operation of splitting the uterus in difficult cases of pyosalpinx, suggested to Morison that by splitting the uterus down its center on and into a tumor removal of the growth might then be possible. The idea was carried out in one case and much to Morison's surprise, when the tumor capsule was divided, the tumor turned

out easily and almost bloodlessly. The halves of the split uterus were readily removed, and the operation was completed as an ordinary supravaginal hysterectomy, the cervix being left behind as a stump. Since then Morison has performed a similar operation between 20 and 30 times without any mortality.

The abdomen is opened in the Trendelenburg posture, the intestines are packed off with sterile gauze wrung out of hot normal saline solution, and the uterus and tumor are exposed by a retractor at the lower angle of the wound. The fundus of the uterus is caught on each side by volsellum forceps and drawn upward and forward into view. The round ligaments are clamped by forceps on either side and divided between two pairs, one above and one below. The peritoneum covering the lower part of the uterus and tumor is cut through transversely between the round ligaments and sponged downward. The uterus is next split from its fundus down the middle line well into the tumor. The edges of the tumor made distinct by retraction of the divided capsule are caught in volsellum forceps and the tumor is enucleated by the finger. After enucleation the cavity quickly contracts, reducing the parts left to manageable dimensions. The bed of the tumor is cut transversely from the middle line outward, first on one side and then on the other, and the body and upper portion of the cervix are turned out and up, exposing the uterine vessels, which are clamped, divided and tied. The remainder of the broad ligament is divided outward and upward till the infundibulo-pelvic ligament containing the ovarian vessels is reached. These are clamped, divided and tied. The uterus and its appendages are then removed. The anterior and posterior lips of the stump of the cervix left are sutured and the cervical stump is fixed to the round ligaments on each side. Finally, the peritoneal flap in front is made to cover and protect the whole by three or four interrupted catgut sutures.

12. **Appendicitis in Typhoid.**—Green reports three cases to show how difficult may be the task of deciding whether a patient is suffering from typhoid or appendicitis.

13. **Sanitation and Infantile Mortality.**—Divine claims that insanitation is a factor of considerable moment in infantile mortality.

The Practitioner, London.

February.

15 *Treatment of Some Forms of Gout. A. P. Luff.
16 *Posterior Tarsal Resection of Foot by Method of Mikulicz and Wladimiroff. A. Young.
17 *Valvular Disease of the Heart. R. Crawfurd.
18 Postpartum Hemorrhage. E. S. Bishop.
19 Interpretation of Sphygmograph Tracings and of Tracings Produced by Compressing Brachial Artery. T. Lewis.
20 Intracranial Abscess: When and When Not to Operate. J. Wyllie.
21 Possibility of Two West African Diseases, "Akatama" and "Vonulo," Being Malarial Paroxysmal Neuroses. F. C. Wellman.

15. **Treatment of Gout.**—Luff deals with the treatment of gout in some of its more frequently occurring forms. Hydrotherapy, balneotherapy, light therapy, etc., is not discussed. For relieving the local pain he recommends the following:

R.	Sodii carbonatis	℥iii	12
	Linimenti belladonnæ		
	Tincturæ opii, ää	℥ii	60
	Aquæ ad	℥viii	240

A small portion of the lotion should be mixed with an equal quantity of hot water, and then poured on cotton wool previously arranged around the joint. The pack should be changed every four hours. In connection with the acute paroxysm, no attempt at local depletion, such as the application of leeches to the inflamed joint, blistering or incisions, should on any account be made, owing to the great liability of thereby extending the inflammatory condition, and so producing subsequent ankylosis or deformity.

For the internal treatment a pill containing the following ingredients is given three or four times a day, immediately after eating:

R.	Colchicinæ	gr. 1/60	001
	Ext. nucis vomicæ	gr. ¼	015
	Ext. hyoscyami	gr. ½	03
	Ext. gentianæ	gr. i	06

[The United States Pharmacopeia gives the dose of colchicina as 1/128 grain.—ED.]

In addition to colchicum in small doses, Luff recommends from 5 to 10 grains of guaiacum in cachets two or three times a day, in the treatment of subacute and chronic gout. For the local treatment of gouty joints Luff advises elevation of the limb, application of a light flannel bandage and the use of hot and cold douches alternately, the Scotch douche and massage. For the removal of edema he employs galvanism and massage.

In cases of gouty hepatic inadequacy he has found the following mixture, taken 15 minutes before meals, most beneficial:

R.	Sodii bicarbonatis	gr. xii	7
	Tinct. nucis vomicæ	m. x	65
	Tinct. gentian comp	℥ss	2
	Spiritus chloroformi	m. xii	7
	Aquæ menthæ pip. ad	℥i	30

16. **Posterior Tarsal Resection of Foot.**—Young reports one case of advanced tuberculous disease of the right tarsal bones in which posterior tarsal resection of the foot by the method of Mikulicz and Wladimiroff was done successfully. A specially devised boot was fitted to the foot so well that for one not cognizant of the actual state of affairs it was practically impossible to detect any limp or defect in the gait.

17. **Valvular Disease of the Heart.**—Crawfurd reports 7 cases of tricuspid stenosis in all of which there was some affection of the mitral orifice with passive congestion of the lungs, of greater or less degree. A thorough postmortem was done in each case.

Journal of Tropical Medicine and Hygiene, London.

February 1.

22 Study of the Evidence as to Source of Infection Which Caused the Cases of Tetanus at Mulkowal, Punjab, India, During Inoculation Against Plague in October, 1902.

Indian Medical Gazette, Calcutta.

January.

23 William Hamilton and the Embassy to Delhi. D. G. Crawford.
24 Epidemic of Malignant Jaundice in Bombay. E. F. G. Tucker.
25 Experimental Investigations as to Potency of Various Disinfectants Against Rat Fleas. W. C. Hossack.
26 A Year's Experience of Malaria at the Outdoor Department of the Medical College Hospital, Calcutta. J. W. D. Megaw.
27 Leishman-Donovan Infection in a Gurkha. T. A. Granger.
28 Hepatic Abscess and Points in Diagnosis of Multiple Hepatic Abscess. G. G. Giffard.
29 A Possible Case of Malta Fever. A. G. Newell.
30 Operations for Extirpation of the Spleen. O. St. J. Moses.
31 Case of Extrauterine Pregnancy. A. M. Leake.

Dublin Journal of Medical Science.

February 1.

32 Chyliform Ascitic Fluid. T. G. Moorhead.
33 Surgical Aspects of Bronchiectasis, Particularly in Children and Young Adults. C. G. Cumston.

Bulletin de l'Académie de Médecine, Paris.

36 (LXXI, No. 5, pp. 161-178.) *Early Diagnosis of Tuberculosis of the Bronchial Glands in Children. (Diagnostic précoce de la tub. des ganglions bronch.) M. A. D'Espine.
37 Successful Hygienic Treatment of Tuberculosis in 100 Children Kept Constantly in the Open Air at the Rouen Public Hospital. (Resultats du traitement hygienique à l'hôpital.) Brunon.

36. **Early Diagnosis of Incipient Thoracic Tuberculosis in Children.**—D'Espine's further experience has confirmed his previous assertions in regard to the frequency of the primary localization in the bronchial glands of tuberculosis affecting the thorax, and also the reliability of his method of diagnosing this primary tuberculous affection of the bronchial glands, before involvement of the lung, by auscultation of the voice. In 1904 he published a report of 119 cases of the kind, and his statements as to the unsuspected frequency of this primary localization of tuberculosis have been corroborated by the recent announcements of Vallée and Calmette in regard to the intestinal origin of tuberculous affections in the thorax. Auscultation as the patient pronounces the words "three hundred and thirty-three" (the words are more resonant in the French—"trois cent trente-trois"), or auscultation as the child cries will reveal a tone superadded to the voice which he calls "whispering" (chuchotement) in the first stage and "bronchophony" in the more advanced stage. In the normal child the organ tone of the trachea stops abruptly at the spinous process of the seventh cervical vertebra, where the lung commences, but with a pathologic process in the bronchial glands the bronchial tone is heard further over the region corresponding to the principal location of the glands. The bronchial organ tone is ac-

centuated by the chain of tumefied glands surrounding the air passage and sometimes continuing back nearly to the spine. The stethoscope is useful to define the extent of the ronchophony, which may extend to the first four dorsal vertebræ or merely to one of them, or to the seventh cervical, but direct auscultation with the ear gives more definite results. If the child is told to pronounce some words in a low tone, an acoustic phenomenon is noted in case of a bronchial adenopathy similar to what Baccelli calls "aphonious pectoriloquism." This D'Espine calls "whispering" (chuchotement). Pronounced dulness on percussion of the spinous processes of the first dorsal or seventh cervical vertebra does not appear until the process in the bronchial glands is in an advanced stage. Interscapular dulness is likewise a sign of far advanced lesions, in the child, as also the bronchial souffle. The finding of this souffle associated with the normal superficial vesicular murmur indicates that the trouble is in the glands, not in the lungs. He cites a number of instructive examples, among them the case of a healthy child of healthy parents, who, after spending the summer on a farm, exhibited slight fever for a time with marked bronchophony. Anemia developed and the child succumbed in eight months to a tuberculous meningitis. Autopsy disclosed tuberculosis of the mesenteric and bronchial glands and pericardium, but no lesions in the peritoneum or lungs. It was found that the cow on the farm whose milk had been taken freely by the child was in an advanced stage of tuberculosis. The father of the child was a physician and professor in the university (Geneva), and he inaugurated a campaign against tuberculosis in cattle which led to drastic regulations in regard to tuberculin testing of cattle. D'Espine adds that he has found the bronchophony almost constantly in the cases of surgical tuberculosis which he has encountered, as also in tuberculous meningitis. Bronchophony has never failed him, while the most reliable other measure in this incipient, latent stage—radioscopy—sometimes fails, as in a case recently published by Mouriquand in which extensive glandular lesions gave no sign of their existence under Roentgen inspection.

Berliner klinische Wochenschrift.

38 (XLIV, No. 1, pp. 1-28.) *Postural Albuminuria. (Orthotische Albuminurie.) O. Heubner.
39 *Abdominal Contusions. (Bauchkontusionen.) O. Hildebrand.
40 Diagnostic Significance of Specific Fixation of the Complement. (Komplementfixation.) A. Wassermann.
41 *Unusual Disturbances with Exophthalmic Goiter. (Seltene Störungen bei der Basedowschen Krankheit.) M. Mosse.
42 *How Long Should Patients Be Kept in Bed After Laparotomies? (Wann soll man Coeliotomierte aufstehen lassen?) C. Hartog.
43 Tuberculous Septicemia. (Tub. Septikämie.) A. Marmorek.
44 Modern Obstetric Operations. (Moderne geburtshilfliche Op.) H. von Bardeleben.
45 (No. 2, pp. 29-64.) *Action on Rabbit Aorta of Intravenous Injections of Suprarenin. (Intravenöse Suprarenininjektionen.) C. Kaiserling.
46 *Inoculation Tuberculosis in Guinea-pigs. (Verlauf der Impftub. bei Meerschweinchen.) H. Beitzke.
47 *Latent Tubercle Bacilli (Latente Tub.-Bac.) Lydia Rabinowitsch.
48 Experimentally Induced Meteorism. (Exp. erzeugten Meteorismus.) A. Bickel.
49 Concentration of the Secretion of the Stomach Fundus is Not Dependent on the Concentration of the Solutions Introduced Into the Stomach. (Reflektorisch abgeschiedener Magenfundussekret, etc.) O. Schloss.
50 *Study of Pancreas in Man. (Einfluss der Zusammensetzung der Nahrung auf die Saftmenge und die Fermentconcentration.) J. Wohlgemuth.
51 Study of Cactus Alkaloids. (Zur Kenntnis des Pellotins.) L. Lincussohn.
52 Lipolysis, Agglutination and Hemolysis. (Lipolyse, etc.) C. Neuberg and E. Rosenberg.

38. **Postural Albuminuria.**—It has long been a disputed question whether the albuminuria which vanishes when the patient reclines is physiologic or functional, or the result of actual disease of the kidney. Heubner brings an important contribution to the subject with the postmortem findings in the case of a child in whom this orthostatic albuminuria had been observed during life and who succumbed to an intercurrent brain tumor. He states that the kidneys were sound macroscopically with the exception of congestion in the organs, without extravasation or hemorrhage. There was also an extremely slight tendency to fat infiltration at a few points, and a minute focus of degeneration, 1 x .5 mm. on the surface. He attributes these slight changes to the long death agony in the case. They were too trivial to be considered, he thinks, in connection with the orthostatic albuminuria which had been observed for a year and a half. A small tuberculous lesion was found at one apex, which confirms the view held by some observers that the postural albuminuria is a "pretuberculous" phenomenon.

39. **Abdominal Contusions.**—Hildebrand discusses the present status of treatment of contusion of the abdomen, reviewing 48 severe cases from his experience. In 31 cases the operation was performed early; 22 of these patients recovered, and 9 died; all the 6 patients with a tardy operation recovered also. Modern surgery can combat incipient peritonitis, but in the later stages it is difficult to handle. The vital energies can be sustained by administering solutions in extensive hemorrhage. If the vital energies have already ebbed too low, then the surgeon is powerless. The diagnosis and decision as to operation can be made only by a specialist of wide experience, consequently it is of the utmost importance, Hildebrand asserts, that the patient after contusion of the abdomen should be brought to the specialist without delay. In one case the intraperitoneal part of the full bladder had ruptured and a loop of small intestine had fallen into the bladder. He sutured the bladder and transplanted the attachment of the peritoneum to the bladder, suturing it at a point lower down than normal, and thus making the seat of the wound extraperitoneal. There is no danger of peritonitis from rupture of the bladder, he adds, if the rupture is entirely extraperitoneal.

41. **Unusual Disturbances with Exophthalmic Goiter.**—In one case, Mosse states, the disease had been much improved by treatment, but Graefe's sign persisted on the right side and ptosis of the lid on the other. In the second case the thyroid gland was not enlarged, but the other symptoms of exophthalmic goiter were pronounced. The cardiac arrhythmia was unusually prominent. In 2 other cases Mosse observed glycosuria in connection with exophthalmic goiter.

42. **When Can a Patient Get Up After a Laparotomy?**—Hartog states that at Landau's clinic, where he is assistant, the patients are allowed to get up much earlier than used to be the rule. They are asked the second day if they wish to get up, and if they reply affirmatively they are allowed to do so. The only exception is in case of plastic operations and hernias. In constitutional affections, such as diabetes, great importance is placed on having the patients leave the bed early. The general rule is that each patient is given a saline enema at body temperature, commencing from 6 to 24 hours after the operation, and repeated every three to four hours, introducing under very slight pressure, and very slowly, about 250 gm. of a 0.9 per cent. salt solution, that is, from half to three-quarters of a tablespoonful of salt in a glass of water. If no flatus has passed by the end of the second day, a pint of cold water is injected, followed later, if necessary, by a glass or a pint of soapy water. Forty-eight hours after the operation one or two tablespoonfuls of castor oil are given in bouillon or brandy or in the foam of beer. The exceptions to these rules are the patients after vaginal operations with forceps and after laparotomies with drainage, in which case the castor oil is not given until after 72 hours. Stimulating the peristalsis by this means relieves the patients of flatulence, and no inconveniences have ever been observed during the five years in which it has been done. Ileus has never presented in any patient thus treated, and no painful adhesions, while these are liable to form if the bowels are left too quiet. The day after the operation the position of the patient is changed, to allow the patient to lie on the side, the upper part of the trunk is raised, and the legs are drawn up. In case of an uneventful primary healing, without drainage, they are allowed to get up by the middle or the end of the first week. The advantages of getting up thus early are obvious, especially the avoidance of thrombosis and embolism and of pulmonary complications.

45. **Influence of Suprarenal Preparations on Rabbit Aorta.**—All the articles in No. 2 of the *Berliner klinische Wochenschrift* issue from the Pathologic Institute at Berlin, of which J. Orth is director, the occasion being a tribute on his sixtieth birthday. He is Virchow's successor in the institute and also editor of *Virchow's Archiv*. Kaiserling's experiments on rabbits

were not confirmatory of those of others in regard to the effect on the aorta of injection of suprarenal preparations. He has found similar lesions in the rabbit aorta without injection of these preparations, and remarks that we know so little in regard to the influence of adrenalin on the arteries that it is absurd to attempt to draw any conclusions in regard to the functions of the suprarenals.

46. **Inoculation Tuberculosis in the Rabbit.**—Beitzke has been studying the course of tuberculosis in 150 guinea-pigs inoculated in the abdomen with scraps from human tuberculous lesions. He found that the tubercle bacilli were generally disseminated by way of the lymph, through the thoracic duct and the blood, thus finding their way to the lungs and bronchial glands or settling primarily in the latter.

47. **Latent Tubercle Bacilli.**—Rabinowitsch relates experiences with inoculation of rabbits with scraps of bronchial and mediastinal glands from children or adults clinically free from tuberculous processes. The glands had been the seat of tuberculous inflammation and had degenerated until they were completely calcified and had evidently been in this condition for a long time, as parts were hard as stone. Microscopic examination was negative, but inoculation of animals revealed that the glands contained tubercle bacilli still retaining their virulence, notwithstanding their long latency.

50. **Functions of the Pancreas and Influence of the Character of the Food.**—Wohlgemuth reports the findings in the case of a young man left with a fistula into the pancreas after rupture of the organ in a bicycle accident. Experiments with various kinds of food to determine which kind induced the least secretion of pancreatic juice, and thus had a tendency to promote the healing of the wound, showed that the production of the pancreatic juice could be readily controlled by care in selection of articles of food. Fats and albumin checked the production of the pancreatic juice, while the carbohydrates induced a copious secretion. The secretion could be further reduced in amount by frequent administration of moderate doses of sodium bicarbonate, especially during the meals. It was also found possible to substitute the loss of pancreatic juice through the fistula by administration of a pancreas preparation by the mouth several times a day. When the patient ate fat in the form of cream and milk the pancreatic juice ceased to flow from the fistula. After eating meat, it flowed again a little, but on a carbohydrate diet an actual stream poured out of the fistula.

Centralblatt für Gynäkologie, Leipsic.

Last indexed, page 85.

53 (XXX, No. 48, pp. 1321-1344.) *Technic and Indications for Pubiotomy. (Pubiotomie.) W. Zangemeister.
54 *Experiences with Pubiotomy. (Pubiotomie.) K. Reifferscheid. (Hebotomie.) H. B. Semmelink.
55 (Nos. 49-50, pp. 1345-1392.) *Prevention of Puerperal Mastitis. (Mastitis.) A. Döderlein.
56 *Determination of Ergot in the Stools. (Mutterkorn in den Fäces.) J. Strasburger.
57 The Cranial End of Müller's Duct. (Eine Fortsetzung der Fimbria ovarica als Kanal im Hilus ovarii.) J. Kocks.
58 (Nos. 51-52, pp. 1393-1440.) *Origin and Treatment of Inversion of the Uterus. (Inversio uteri.) K. Holzapfel.
59 *Infusion of Oxygen in Treatment of Asphyxia in the New-Born. (Sauerstoffinfusionen asphyktischer Neugeborener.) Offergeld.
60 Origin of Arteriomesenteric Occlusion of Duodenum. (Arteriomesenterialverschlusses des Duodenums.) H. Albrecht.
61 (XXXI, No. 1, pp. 1-32.) *Passage into the Bladder of a Gauze Sponge Left in Abdomen After a Laparotomy. (Gazetupfer in die Blase.) W. Stoeckel.
62 *Looping of Umbilical Cord and Its Supposed Disadvantages After Emergence of Face. (Nabelschnurumschlingung.) E. Holzbach.
63 Decapsulation of Kidney with Puerperal Eclampsia. (Nierendekapsulation.) O. Polano.
64 (No. 2, pp. 33-64.) *Technic of Scopolamin-Morphin Anesthesia in Obstetrics. (Skop.-Morph. Dämmerschlaf.) C. J. Gauss.
65 Repeated Pubiotomy on Same Patient. (Wiederholte Pubiotomie.) Preller.
66 Mono-amniotic Twins with Interlooped and Knotted Umbilical Cords. (Monoamniot. Zwillinge.) W. Piltz.

53. **Technic and Indications for Pubiotomy.**—Zangemeister advises inserting the needle from below, and expectant treatment after the bone has been sawed. Spontaneous delivery then frequently occurs. He describes two cases in which the saw was introduced and left in place while version was done, after which the child was readily delivered, although the bone had not been sawed. In some of the published cases in which the pubiotomy was done first, the success may have been erroneously attributed to the sawing of the bone when, in reality, delivery might have proceeded smoothly without it.

54. **Further Experiences with Pubiotomy.**—Reifferscheid reviews his experiences with 22 cases in which pubiotomy was done at the Bonn clinic. One of the patients succumbed to pulmonary embolism, and in 2 others the bladder was seriously injured. Laceration of the perineum was observed in another case, and thrombosis of the femoral vein occurred during the puerperium in another, while one patient had slight exudation at the wound. Slight fever during the puerperium was observed in 13 cases. Forceps were required in 8, version in 9, extraction in 3, and in 2 instances delivery occurred spontaneously. In 4 cases the saw was introduced, but no sawing was done until the signs showed that it was imperatively needed. All the children left the clinic alive. The greatest danger is injury of the bladder, which is pressed forward and over the edge of the symphysis by the enlarged uterus. The much curved Bumm needle is safest, as it curves close around the upper edge of the symphysis. It will not be possible always to avoid injury to the bladder with the subcutaneous Bumm technic, as the bladder may be fastened to the symphysis. In both Reifferscheid's cases of injury there had been previous febrile childbirths. It might be safer, therefore, he says, to make a small incision at the upper edge of the symphysis and detach the periosteum from its posterior surface. Even then, injury of the bladder is possible against the sharp, cut edges of the bone as the child is delivered and the bone spreads. The statistics of pubiotomy to date are 12 deaths in 202 cases, a much higher mortality than with artificial premature delivery (5.94 with pubiotomy and 1.4 per cent. with artificial delivery), but the prospects for the child are much better with pubiotomy. Semmelink relates a case of injury of the bladder while he was introducing a Seeligmann needle preliminary to drawing through the wire saw.

55. **Prevention of Puerperal Mastitis.**—Döderlein has found a solution of rubber and benzin with 1 per cent. formalin useful as a protecting coat for the skin. The benzin evaporates, leaving a thin impervious coating fitting tight over the skin, while the formalin has direct bactericidal action. He first cleanses the parts with iodin-benzin, then paints them with tincture of iodin and then applies the rubber mixture. This preparation before laparotomies and vaginal operations has been found successful in eliminating all tendency to wound infections. Applied to the nipple it protects it against cracks and fissures, and thus tends to ward off mastitis. The outlets for the milk are closed by the rubber, but the pellicle is so delicate that it breaks at these points as the child sucks. After nursing, the breast can be washed in water or alcohol as usual, for the rubber pellicle does not dissolve except with benzin, ether or chloroform. The mixture is applied every two or three days, and in an experience with 200 patients there has been no tendency to mastitis in any instance.

56. **Ergot in the Feces.**—Strasburger was able to detect particles of ergot in the feces after its administration by the mouth to several different persons and to dogs. The microscopic findings were positive even after a single dose of 1 gm. He regards this as possibly important in certain cases from a medicolegal standpoint or to determine ergot poisoning in bread. The findings were positive only during from 24 to 36 hours after administration of the ergot.

58. **Inversion of the Uterus.**—Holzapfel describes a case of total inversion of the uterus after childbirth. He ascribes the inversion to atony, which assumption is supported also by the unusually large proportion of inversions after still-births. If the atony is neglected, serious results are liable to follow. He thinks that greater attention should be paid to supervising the final stage of delivery, leaving the child unattended until the birth is complete.

59. **Treatment of Asphyxiated New-Born Infants with Infusion of Oxygen.**—Offergeld has tried infusion of oxygen through the umbilical vein in 12 cases of asphyxiated new-born infants. Only 3 of the children were revived, and his opinion of the oxygen infusions is decidedly unfavorable. He

is even inclined to regard them as responsible for extinguishing the last spark of life. He regards Schultze's swinging as not entirely free from danger, and is more favorably impressed with Ahlfeld's method of prolonged warm baths combined with artificial respiration. He states that it is sometimes astounding to witness the revival of the child after persevering continuance with this method for an hour or more.

61. Removal from Bladder of Gauze Left After Laparotomy.—Stoeckel reports a case of fistula in the abdominal wall after an ovariotomy with suture of the bladder. The cystoscope showed that a gauze sponge left in the abdomen over the bladder wound had perforated into the bladder. It was drawn out with forceps and the subsequent hemorrhage was easily controlled. He remarks that such mishaps are liable to occur with the most careful surgeons and those who have caustic criticism for anything of the kind are generally those whose operative experience is not very extensive.

62. Loop of Umbilical Cord Around Neck.—Holzbach presents arguments to show that after the face is once delivered there is no further danger for the child from a loop of the umbilical cord around its neck, while there is likely to be grave danger for the mother if attempts are made to remove the loop from the child's neck. The traction may detach the placenta or injure the vessels in the cord or do other damage.

64. Scopolamin-Morphin Anesthesia in Obstetrics.—Gauss describes the technic and results of scopolamin-morphin anesthesia as applied in 1,000 cases at Krönig's clinic at Freiburg. The drugs are given in gradually increasing amounts until the patient dozes without knowledge or memory of what is going on, but also without the profound sleep of general anesthesia. The labor pains must occur with a certain frequency and intensity before the anesthetics are administered. For this reason, primary weak labor pains are regarded as one of the few contraindications to the application of the technic. At first 1/200 gr. (0.0003 gm.) of scopolamin and ¼ gr. (0.01 gm.) of morphin are injected, and later a second dose of scopolamin, without morphin. The total is generally about 1/150 gr. (0.00075 gm.) scopolamin, and ¼ gr. (0.01 gm.) morphin, but sometimes a little more may be required. The patient's power of perception is the test as to dosage, and this is determined by briefly showing her some object at half-hour intervals and asking her if she had seen it when shown it before. If she says yes, this shows that she was conscious when she was first shown it. This test is repeated with new objects each time, the aim being to keep the patient in the "twilight sleep," that is, so drowsy that the powers of perception and memory are lost while she is still conscious to a certain extent.

Deutsche Zeitschrift f. Chirurgie, Leipsic.

Last indexed XLVII, pages 466 and 515.

67 (LXXXIII, Nos. 1-2, pp. 1-211.) Appendicitis and Icterus. (App. und Ikterus.) P. Reichel.
68 *Pathology and Treatment of Abscess in the Spleen. (Milzabszess.) L. Kirchmayr.
69 Hindrances to Reduction in Preglenoid Dislocation of the Shoulder, with Special Regard to Subcoracoid Luxation. (Schultergelenkluxation.) T. Bach.
70 *Pathology and Treatment of Congenital Displacement of the Kidney. (Nierendystopie.) M. Strater.
71 *Subcutaneous Extirpation of Enlarged Veins in the Legs. (Subkut. Exstirpation ektatischer Venen.) A. Narath.
72 Plexiform Neuroma. (Rankenneurom.) M. Strauss.
73 Pathology of the Patella. (Kniescheibe.) Creite.
74 Experimental Research on Etiology of Fat Tissue Necrosis and Changes in the Liver in Injury of the Pancreas. (Fettgewebsnekrose und Leberveränderungen bei Schädigung des Pankreasgewebes.) E. Payr and A. Martina.
75 Six Cases of Syringomyelia. (Syringomyelie.) O. Luders.
76 (Nos. 3-4, pp. 213-400.) *Clinical and Histologic Study of Transplantation of Skin, Especially Sowing with Epithelium. (Hautverpflanzung und Epithelaussaat.) K. Noesske.
77 *Absorption by the Peritoneum and Means to Influence It in Peritonitis. (Bauchfellresorption.) P. Glimm.
78 *Suture of the Heart for Stab Wound. (Herznaht.) E. Tschernjachowski.
79 Myxo-fibrosarcoma of Bursa in the Heel. (Myx. der Bursa achillea post.) A. Martina.
80 *Operative Treatment of Inguinal Hernia in Children. (Ingh. bei Kindern.) Bühlmann.
81 Treatment of Gangrenous Inguinal and Femoral Hernias. (Leisten- und Schenkelbrüche.) H. Barlocher.
82 Total Dislocation of Half of Pelvis. (Lux. einer Beckenhälfte.) Creite.
83 *Ureter Catheters Impermeable to Roentgen Rays. (Röntgenschatten gebende Ureterenkatheter.) R. Göbell.

68. Abscess in the Spleen.—The diagnosis in Kirchmayr's case was based on the sudden rise in temperature, the peculiar cup shape of the area of dulness at the lower margin of the left pleura, and the fact that the patient was recovering from a mild attack of typhoid fever. Pure cultures of the typhoid bacilli were cultivated from the pus. The pleural cavity was opened after resection of 10 cm. of the tenth and eleventh left ribs, and the costal pleura was sutured to the diaphragmatic pleura, thus bringing the tumor outside of the thorax. The wound was then closed with gauze. Four days later the protruding part of the diaphragm was opened through the same incision, allowing the escape of pus and a piece of spleen tissue 3x5 cm. The surface of the spleen was adherent to the peritoneal surface of the diaphragm. The patient was dismissed cured about eight weeks after the first operation.

70. Treatment of Congenital Dislocation of the Kidney.—Strater warns against hasty measures in operating for displaced kidney as ligation of vessels, or heedless drawing forth of the tumor, whose nature is still unsuspected, may do irreparable damage to a perfectly sound kidney, whose only fault is to be out of its normal place. Seven cases are on record in which the tumor was extirpated and then found to be the sound kidney or was injured so much in exposing it that it had to be removed. Warnings against such procedures are not out of place, as study of the literature shows. In 2 of the cases the extirpated kidney was the only one existing. When the misplaced kidney causes no symptoms it should be left alone, as a rule. Even when symptoms are present, careful research should be made for some other cause. In several instances removal of diseased uterine adnexa put an end to all the symptoms without interference with the misplaced kidney. In case of symptoms attributable to the displacement, especially obstinate constipation, even a slight change of position for the kidney may remove the pressure from the bowel. An attempt should always be made to move the kidney and to fasten it at some more convenient point, reserving nephrectomy as the last resort. In beginning pregnancy, if there is a prospect that the displaced kidney will interfere with delivery, Strater advises nephropexy even if the displaced kidney is causing no symptoms. In advanced pregnancy, if the displaced kidney interferes with delivery, an operation to enlarge the pelvis is indicated rather than the removal of a sound kidney. In case the kidney is degenerated, it may be reduced in size by puncture or extirpated, but a healthy kidney, he reaffirms, is by no means an organ that can be casually removed.

71. Subcutaneous Removal of Varicose Veins on the Leg.—Narath states that for years he has operated on varicose veins by mobilizing them through a series of very small incisions at intervals. It is thus possible to mobilize long stretches of the vein and to resect them in one piece through a row of buttonhole incisions. He describes his technic as performed on a large number of patients.

76. Sowing with Epithelium in Transplantation of Skin.—Noesske reports experiences with von Mangoldt's method of sowing raw surfaces with tiny particles of epidermis obtained by scraping the skin, thus obtaining a formless mass of blood and tissue. The edge of the razor is held perpendicularly, the skin below being stretched tight with the other hand. The first scraping of the surface is discarded; the fine punctate bleeding as the tops of the papillæ are cut off shows that the proper layer has been reached, the one with the most vitality. The mixture of blood and epithelial cells resulting from the scraping is then transferred directly to the surface to be covered and is spread out evenly over it, after which the technic is the same as for Thiersch flaps. He gives clinical and histologic studies of the results, affirming that the method is much simpler and more convenient and that much less substance is required to cover extensive surfaces than with other technics. This sowing with epithelium has special advantages, he declares, for lining cavities in the long bones after operations for osteomyelitis and the like. The cosmetic results are better than with the Thiersch flaps, but a longer time is required for the healing. This disadvantage is compensated by the fact that the simple operation can be repeated at any time if the islands of cells that have taken root do not enlarge rapidly enough. The new covering is delicate and the method is thus best adapted for surfaces not exposed to friction. As

the new-formed skin does not contain sebaceous glands, it is liable to crack and ulcerate under long-continued irritation, the same as the Thiersch flaps, but in its own domain it gives extremely satisfactory results. He cites as an example the rapid healing over of a defect left after removal of an extensive mammary cancer. He applied Thiersch flaps around the edges, but the central portion of the large defect was covered with the epithelium. Two years later the central portion looks smooth and comparatively white, while the Thiersch flaps healed unevenly, with wrinkles and brownish pigmentation. He has found that spraying with ethyl chlorid seems to hasten the proliferation of the transplanted epithelial cells.

77. **Absorption by the Peritoneum.**—Glimm writes from Loeffler's Hygienic Institute to relate the result of research which demonstrates that bacterial infection of the abdominal cavity promotes absorption by the peritoneum. If the absorption of the bacteria can be checked, the course of the peritonitis is favorably influenced. He has found that injection of oil checks the absorption of bacteria in case of peritonitis due to the colon bacillus, and thus influences the peritonitis favorably. The concordant results of experiments on 56 dogs and rabbits encourages him to attempt injection of about 130 c.c. of 1 per cent. camphorated oil in cases of peritonitis in the clinic when the outlook is absolutely bad, after the failure of all other measures. He also thinks that the injection of oil might be successfully tried in cases of encapsulated abscesses that show no tendency to heal under appropriate treatment. He asserts that no harm can possibly result, while the benefit might be great. He warns against prophylactic injections, as the tolerance of the normal human peritoneum for oil has not been determined as yet.

78. **Suture of the Heart.**—Tscherniachowski adds another to the 89 cases of suture of the heart he has found on record, and summarizes the details of each. The pleura was involved in all but 7 cases. The mortality was 44 per cent. in the 25 cases in which the pleura was sutured, while it was 55.55 per cent. in the 27 cases in which the pleural wound was merely tamponed. The mortality was twice as great in the 42 cases in which the pericardium was sutured at once, as in the 23 cases that were drained (59.42 per cent. and 34.78 per cent.). The total mortality of the 74 stab wound cases was 43.24 per cent., and of the 9 bullet wound cases 55.55 per cent. The symptoms are frequently misleading, the severest wounds sometimes causing slight symptoms, and vice versa.

80. **Operative Treatment of Inguinal Hernia in Children.**—Bühlmann reviews the literature on the subject and describes the experiences at Tavel's clinic at Berne, with summaries of the cases. Operation was undertaken in 198 instances. His conclusions are absolutely unfavorable in regard to trusses for children, as they afford no guarantee of permanent cure. Operative treatment is indicated, he says, whenever a hernia is noticed in a child, regardless of age. The earlier it is done the easier the technic, from the absence of adhesions. Direct hernia is extremely rare in infants. Tavel's technic does not require more than ten or fifteen minutes, and the child is freed at once from the discomfort of years of truss wearing. The principle is the same as in the Broca and Stiles technic; recurrence has never been observed. The hernial sac is resected and the stump pushed back into the abdominal cavity, and the inferior and superior pillars are sutured together in front of the seminal cord with three interrupted sutures with No. 3 silk. The vessels are ligated with No. 2 silk, which is also used to suture the skin, with a straight needle. The anatomic conditions in children are studied and illustrated.

83. **Ureter Catheter Impermeable to the Roentgen Rays.**—Göbell refers to the advantages of using a catheter for the ureter that casts a shadow under the Roentgen rays in case radioscopy becomes necessary. This is easily accomplished by coloring with vermilion or cinnabar the lacquer used in making the catheter. He has his catheters thus made with every alternate centimeter black or red, which aids in cystoscopy.

Hospitalstidende, Copenhagen.

Last indexed, page 182.

84 (XLIX, No. 46, pp. 1229-1252.) Case of Congenital Total Color Blindness and Theoretical Study of Visual Perception. (Total Farveblind.) H. Rønne.

85 (Nos. 47-48, Pp. 1253-1300.) *Diagnosis of Apoplexy. (Apoplexiens Diagnostik.) A. Friedenreich.

86 Case of Progressive Muscular Atrophy with Autopsy. (Dystrophia musc. progr.) K. Malling.

87 (Nos. 49-51, Pp. 1301-1372.) Vision and Its Physiochemical Basis. (Om. Synet og dets fysisk-kemiske Grundlag.) A. Meisling.

88 *Spermatocystitis with Gonorrheal Epididymitis. (Gonorréen hos Manden.) A. Brönnum.

89 (No. 52, Pp. 1373-1396.) *Transmission of Human Tuberculosis to Cattle. (Overførelse af Menneskетuberkulose til Kvæget.)

90 (I, Nos. 1-2, Pp. 1-48.) Multiple Endothelioma of the Scalp. (Multiple Endotelliomer i Hovedets Hud.) P. Haslund.

91 Varying Density of the Islands of Langerhans and Study of Their Formation. (Undersøgelser over Bugspytkirtlen.) K. A. Heiberg.

85. **Differentiation of Apoplexy.**—Friedenreich has been studying the points which differentiate hemorrhage in the brain from softening on a basis of arteriosclerosis. Since 1900 about 422 patients with apoplexy have been treated at the public hospital and 256 succumbed. Of this number 201 came to autopsy, and in 5 both cerebral hemorrhage and softening were found. This leaves 197 cases for research on the differentiating points, as softening of the brain was observed in about a third and cerebral hemorrhage in the others. After critically sifting and reviewing the various symptoms observed and comparing them with the postmortem findings, he summarizes the signs that indicate cerebral hemorrhage as follows: Severe onset, especially with profound coma, and inability to move the limbs in the total and extensive cerebral paralysis which frequently is rapidly fatal; blood-stained cerebrospinal fluid on lumbar puncture; age under 55 (especially under 50); low temperature at first, if no other cause for the subnormal temperature can be discovered; possibly a mild epileptic seizure as the initial symptom; retinal hemorrhage and rigidity of the paralyzed limbs, especially of the arms. Further useful signs, although of comparatively less importance, are hypertrophy of the heart without a valvular defect; albuminuria or nephritis, and normal or hyperemic papilla, and the vessels in the retina well filled or gorged. There are no pathognomonic signs for acute softening, but the absence of initial loss of consciousness, with the serious paralysis and with the rarer partial, dissociated paralysis suggest softening rather than cerebral hemorrhage. Further useful signs are the incompleteness of the paralysis, pale papillæ and undistended retinal vessels. Sometimes the paralysis comes on gradually and there may be restlessness and vagueness. A valvular defect also points to softening, and likewise the determination of a prodrome or previous attack, or senile epilepsy. Low blood pressure, if no other cause for it can be assigned, also points to softening, also clear cerebrospinal fluid. In the cases reported the hemorrhage was differentiated during life in 89 out of 108, and softening in 40 out of 63, the diagnosis being correct, therefore, in an average of 3 in every 4 cases. During the later series the data collected and recorded in this article enabled still more frequent accurate differentiation.

88. **Involvement of Seminal Vesicles with Gonorrheal Epididymitis.**—Brönnum relates that he was able to express the pathologic secretion from the seminal vesicles after urination, expression of the prostate, renewed urination and rinsing out of the urethra with a solution of boric acid. The bladder is then filled with the boric acid solution, the catheter withdrawn and the seminal vesicle on the side of the epididymitis is manipulated with the fingers. The contents of the bladder are then withdrawn and centrifugated and the sediment examined for leucocytes and gonococci. He had positive findings in this respect in 16 out of 20 cases of gonorrheal epididymitis at the Frederiksberg Hospital, that is, in 80 per cent. In the other cases leucocytes were found without gonococci, and in only one case were the findings negative. The seminal vesicle was swollen in 15 of the cases. He noted enlargement of the seminal vesicle in a number of other cases, not included in these statistics, which are restricted to those cases in which the above technic or expression was applied. He calls it the "complete expression method" (fuldstændig Expressionsmetode), and advises its application in every case of gonorrheal epididymitis, although not at every examination. It is not necessary to use it except for the vesicle on the affected side. He stains the centrifugated sediment with methylene blue for examina-

tion under the microscope, and uses the Gram technic in dubious cases. The careful preliminary expression of the prostate and cleansing of the urethra eliminate, he thinks, the danger of error from admixture of secretion from other points. He is careful to restrict the palpation to the single seminal vesicle involved.

89. Transmission of Tuberculosis from Cattle.—Jensen and Fibiger's third report on their extensive researches in this line describes 2 cases of fatal primary intestinal tuberculosis in the digestive tract with incipient miliary tuberculosis of the lungs and liver. The patients were children who had been fed with milk from different dairies, including one having tuberculous cattle. The development of a tuberculous udder affection in one of the cows corresponded with the date of the development of the tuberculous affection in the child later, in one case. Bacilli from both cases displayed great virulence in inoculation of calves and rabbits. They add that it is difficult to imagine more convincing testimony as to the danger from raw milk than these cases present. Similar testimony in the literature is collected and analyzed, with the result that Jensen preaches that the theory as to the rarity of primary tuberculosis of the intestines will have to be abandoned as the evidence on hand of the contrary is so convincing. He asserts that tuberculous infection of the digestive tract has a far greater share in the prevalence of tuberculosis than has hitherto been imagined, and especially infection from cattle. Whether adults are less susceptible than children to infection from tuberculous cattle is still an undecided question which he is now investigating, along with the importance of the changes induced in tubercle bacilli by passage through man and through cattle.

Hygiea, Stockholm.

Last indexed XLVII, page 1143.

92 (LXVIII, No. 8, Pp. 705-832.) Elimination of Mercury Through the Urine. (Kvicksilfrets afsöndrande genom urinen.) E. Welander.

93 Clinical Cure in Case of Pseudoleukemia under Roentgen Rays. (Röntgen-ljusets inverkan på blodet.) E. Wikner.

94 (No. 9, Pp. 833-960.) The Birth Rate in Modern Times and the Prospects for the Future. (Nativiteten i nutiden och dess framtidsutsikter.) P. Fahlbeck.

95 *Primary Tuberculosis of the Kidneys, with Especial Regard to Diagnosis and Symptoms. (Primär. njurtuberkulosen.) G. Ekehorn. Concluded in No. 10.

96 Marmorek's Antituberculosis Serum. (Marmorek's serum mot tub. sjukdomar.) F. E. v. Sydow.

97 (No. 10, Pp. 961-1088.) *Case of Volvulus of Small Intestine with Meckel's Diverticulum and Study of "Subacute Ileus" and Gastrostomy for Paralysis of Small Intestine. (Tunntarmsvolvolus och tunntarmsparalysi.) K. G. Lennander.

98 Which Cases of Pulmonary Tuberculosis Are Adapted for Treatment in a Public Sanatorium? (Folksanatorievård.) J. Tillman.

99 Gonorrhea in Prostitutes. (Gon. hos prostituerade.) F. Sandman.

100 (No. 11, Pp. 1089-1216.) *Epidemic of Acute Paralysis Following Anterior Poliomyelitis in Sweden, 1905. (Om den s. k. akuta barnförlamningen.) H. Lundgren.

101 School and Transmissible Diseases. (Skolan och de smittosamma sjukdomarna.) G. Steenhoff.

102 Experiences with Cataract Operations. (Om starroperationer.) V. L. Lundberg.

103 Sterilization of Catgut by Boiling in Alcohol. (Sterilisering af katgut genom kokning i absolut alkohol.) P. Clarholm.

104 Diagnostic Importance of Abdominal Reflexes in Atypical Multiple Sclerosis. (Atypisk multipel skleros.) E. Rodhe.

95. Tuberculosis of the Kidneys.—Ekehorn gives the details of 41 cases of primary tuberculous affections of the kidneys. He announces as a rule that it is not sufficient to catheterize the ureter alone if the findings show that the kidney above is diseased. On the other hand, it is unnecessary to catheterize the other ureter if the urine is found free from pus and tubercle bacilli, with manifest signs of a tuberculous process in the other kidney. Catheterization of the ureters is indispensable in many cases, as even exploratory incision may give misleading findings and a single cystoscopic examination without catheterization of the ureter may give deceptive findings. Functional tests of the urine, such as cryoscopy, he states, are of subordinate importance.

97. Paralysis and Volvulus of Small Intestine.—Among the lessons learned from the case of volvulus of the small intestine described, and from a recent case of acute dilatation of the stomach and other similar experiences, Lennander mentions especially that when the stomach or small intestine becomes stretched beyond a certain point it can not contract until it is partly emptied. The extreme stretching prevents muscular contraction. The extremely distended, but not paralyzed, intestine appears to be paralyzed when it is inspected, but if an opening is made into it and some of its contents removed, the muscle is then able to contract and it will empty itself spontaneously through the fistula. The really paralyzed intestine does not contract, and, to enable it to recover, the enterostomy must be made proximal to the paralyzed portion. In case the paralysis involves the upper part of the duodenum the fistula will have to be made in the pyloric part of the stomach. He makes it a rule to do this gastrostomy without delay when, after he has emptied the small intestine and jejunum, the jejunum shows no signs of contracting. He also does gastrostomy in cases in which there are no indications for it at the laparotomy, and yet the abdomen continues to increase in size, the pulse rate grows more rapid or remains fast, and lavage of the stomach, repeated two or three times, gives findings indicative of retention of fluids with a disagreeable odor. These, he reiterates, are ample indications for performing gastrostomy without further delay. Since treatment on these principles has been introduced in his clinic the outcome in such cases has been immeasurably better.

100. Epidemic of Acute Anterior Poliomyelitis Occurring in Sweden During 1905.—Lundgren traces the clinical picture of the disease as observed in 147 cases in the Växjö district. There were 403 cases in the entire epidemic which commenced in April and reached its highest point in August and September; no case has been known since the beginning of 1906. The incubation seemed to be about 8 or 10 days, and a prodromal period followed lasting from 1 to 3 days, with headache, vomiting, stiffness in the back of the neck, pains in the back, fever, and somnolence in the smaller children, with convulsions in some cases. The symptoms subsided after a few days, leaving a certain weakness in the arms or legs and a staggering gait in some cases. In the majority, however, as the initial symptoms subsided, a gradual paralysis was observed, with paresis of the bladder, and in one case, disturbances in sight and in another of hearing, with loss of speech in a number. The mortality was about 10 per cent. Permanent paralysis was left in about 25 per cent. of the cases.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

TEXT-BOOK OF PSYCHIATRY. A Physiological Study of Insanity for Practitioners and Students. By Dr. E. Mendel, A. O. Professor in the University of Berlin. Authorized Translation Edited and Enlarged by William C. Krauss, M.D., Buffalo, N. Y., Neurologist to Buffalo General Hospital. Cloth. Pp. 311. Price, $2.00 net. Philadelphia: F. A. Davis Company, 1907.

PARAFFIN IN SURGERY. A Critical and Clinical Study. By W. H. Luckett, B.S., M.D., Attending Surgeon, Harlem Hospital, and Frank I. Horn, M.D., Assistant Surgeon Mt. Sinai Hospital Dispensary, New York City. With thirty-eight illustrations. Cloth. Pp. 118. Price, $2.00. New York: Surgery Publishing Company, 1907.

THIRTY-SEVENTH ANNUAL REPORT of the Board of Managers and Superintendent of the New York State School for the Blind, Batavia, N. Y. For the Year 1904-1905. Transmitted to the Legislature. March 1, 1906. Paper. Pp. 121. Albany: Brandow Printing Company.

A POCKET FORMULARY. By E. Quin Thornton, M.D., Assistant Professor of Materia Medica in Jefferson Medical College, Philadelphia. Eighth Edition, Revised. Leather. Pp. 287. Price, $1.50 net. Philadelphia and New York: Lea Bros. & Co., 1907.

MANUAL OF CLINICAL CHEMISTRY. By A. E. Austin, A.B., M.D., Professor of Medical Chemistry and Toxicology in the Medical Department of Tufts College, Boston. Cloth. Pp. 278. Price, $1.75. Boston: D. C. Heath & Co., 1907.

PLASTER OF PARIS AND HOW TO USE IT. Martin W. Ware, M.D., Instructor of Surgery in the New York Post-graduate School. Cloth. Pp. 88. Price, $1.00. New York: Surgery Publishing Company, 1906.

ANNUAL REPORT of the Surgeon-General of the Public Health and Marine-Hospital Service of the United States, for the Fiscal Year 1906. Cloth. Pp. 255. Washington: Government Printing Office, 1907.

DIAGNOSIS AND TREATMENT OF INTUSSUSCEPTION. By Charles P. B. Clubbe, Hon. Surgeon to the Royal Prince Alfred Hospital. Cloth. Pp. 92. Edinburgh and London: Y. J. Pentland, 1907.

THIRTY-SIXTH ANNUAL REPORT of the Central State Hospital of Virginia, Petersburg, for the Fiscal Year Ending September 30, 1906. Paper. Pp. 86. Richmond: Davis Bottom, 1906.